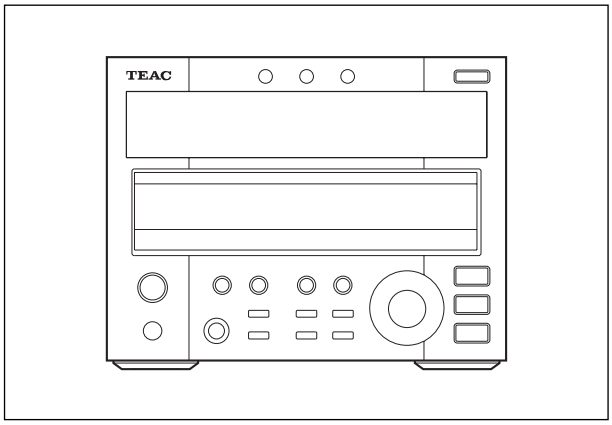

TEAC

SERVICE MANUAL

EX-CD3

CD/TUNER/AMPLIFIER

NOTES

- PC boards shown are viewed from parts side.
- The parts with no reference number or parts number in the exploded views are not supplied.
- As regards the resistors and capacitors, refer to the circuit diagrams contained in this manual.
- ⚠ Parts marked with this sigh are critical components. They must be replaced with identical components - refer to the appropriate parts list and ensure exact replacement.
- Parts of [ ] mark can be used only with the version designated.
  [J] : JAPAN [US] : U.S.A. [C] : CANADA
  [E] : EUROPE [UK] : U.K. [GE] : GENERAL EXPORT

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Specifications

AMP Section

Output Power	: 20 W/ch (0.5%, 6 ohms, 1 kHz)
Input Sensitivity	: 200 mV
Frequency Response	: 20 Hz to 40,000 Hz

General

Power Consumption	: 60 W
Power Requirements	: 120 V, 60 Hz [US] 230 V, 50 Hz [EUR]
Dimensions (W x H x D)	: 175 x 140 x 360 mm
Weight (net)	: 4.0 kg

Standard Accessories

Remote Control Unit
Operator's Manual
AM Loop Antenna
FM Lead-type Antenna

- Design and specifications are subject to change without notice.
- The illustrations may differ slightly from production models.

FM Section

Frequency Response	: 87.50 MHz to 108.00 MHz (100 kHz steps) [US] (50 kHz steps) [EUR]
Signal-to-Noise Ratio	: Mono: 65 dB (Mono) Stereo: 56 dB (Stereo)

AM Section

Frequency Response	: 530 kHz to 1720 kHz [US] (10 kHz steps) : 522 kHz to 1620 kHz [EUR] (9 kHz steps)
Signal-to-Noise Ratio	: 35 dB

CD PLAYER Section

Signal-to-Noise Ratio	: 80 dB (with IHF "A" Filter)
T.H.D	: 0.05% (1 kHz, 20 kHz LPF)
Channel Seperation	: 55 dB (1 kHz)
Channel Balance	: 1 dB
Frequency Response	: 17 Hz - 20 kHz (±1.5 dB)
Wow Flutter	: Bellow Measurable

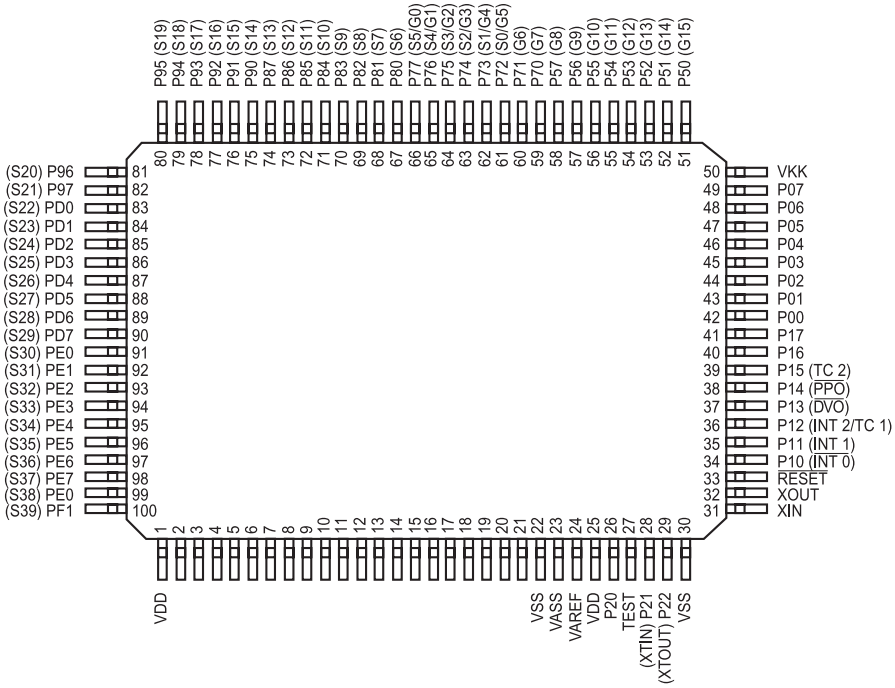
IC36 PIN FUNCTION (IC : BVITMP87PM78F)(AMP)

PIN No.	NAME	I/O	DESCRIPTION
1, 25	VDD	-	POWER SUPPLY (+5V)
6	HREQ	I/O	BUS for CD CLOCK
7	SLQCLK	I/O	BUS for CD CHIP ENABLE
8	SLQIN	I	RESET for CD
9	SLQOUT	O	MUTE for CD SINGLE
12	DATA	O	EUROPE VERSION RDS DATA CONTROL PORT
13	CLOCK	O	
14	STEREO IN	I	STEREO IN CONTROL INPUT
15	TUNED	I	TUNED CONTROL INPUT
16	HPIN		
17	PROTECTOR	I	PROTECTOR IN PORT
19, 20, 21	KEY MATRIX	I	KEY MATRIX PORTS
22,23,27,30	VSS	-	GND
24	VAREF	-	A/D CONVERTOR REFERENCE VOLTAGE
26	BACK UP	I	BACK-UP MODE CONTROL INPUT
28, 29	X-TAL	I	32.768kHz SUB CLOCK CONNECTING PORT
31	X IN	I	8MHz CRYSTAL CONNECTING TERMINAL
32	X OUT	O	
33	RESET	I	SYSTEM RESET PULSE INPUT
34	REMOTE IN	I	REMOTE CONTROL SIGNAL INPUT
35	BUS IN	I	REMOTE CONTROL SIGNAL INPUT
36	BUS OUT	O	REMOTE CONTROL SIGNAL INPUT
38	SPEAKER	O	SPEAKER ON/OFF PORT
41	CE	O	PLL DATA CONTROL PORT
42	DATA OUT	O	
43	CLOCK	O	
44	DATA IN	I	
45	CLOCK	O	TDA7318D DATA CONTROL PORT
46	DATA	O	
47	POWER	O	POWER ON/OFF
48	MUTE	O	SIGNAL MUTE
50	VFL		(-33V) NEGATIVE POWER SUPPLY FOR FIP BLINKING
52 ~ 60	GRID	O	FIP GRID CONTROL OUTPUTS
61 ~ 82	SEGMENT	O	FIP SEGMENT CONTROL OUTPUTS
83 ~ 87		I	AREA OPTION
89	CD POWER	O	CD POWER ON/OFF PORT
90	ON/STBY LED	O	ON/STANDBY LED CONTROL PORT
91	TAPE 'H'	O	ON TAPE FUNCTION 'H' OUTPUT PORT
93	MD 'H'	O	ON MD FUNCTION 'H' OUTPUT PORT
96, 97	JOG CONTROL	I	VOL/BAL/BASS/TRE CONTROL JOG INPUT PORT

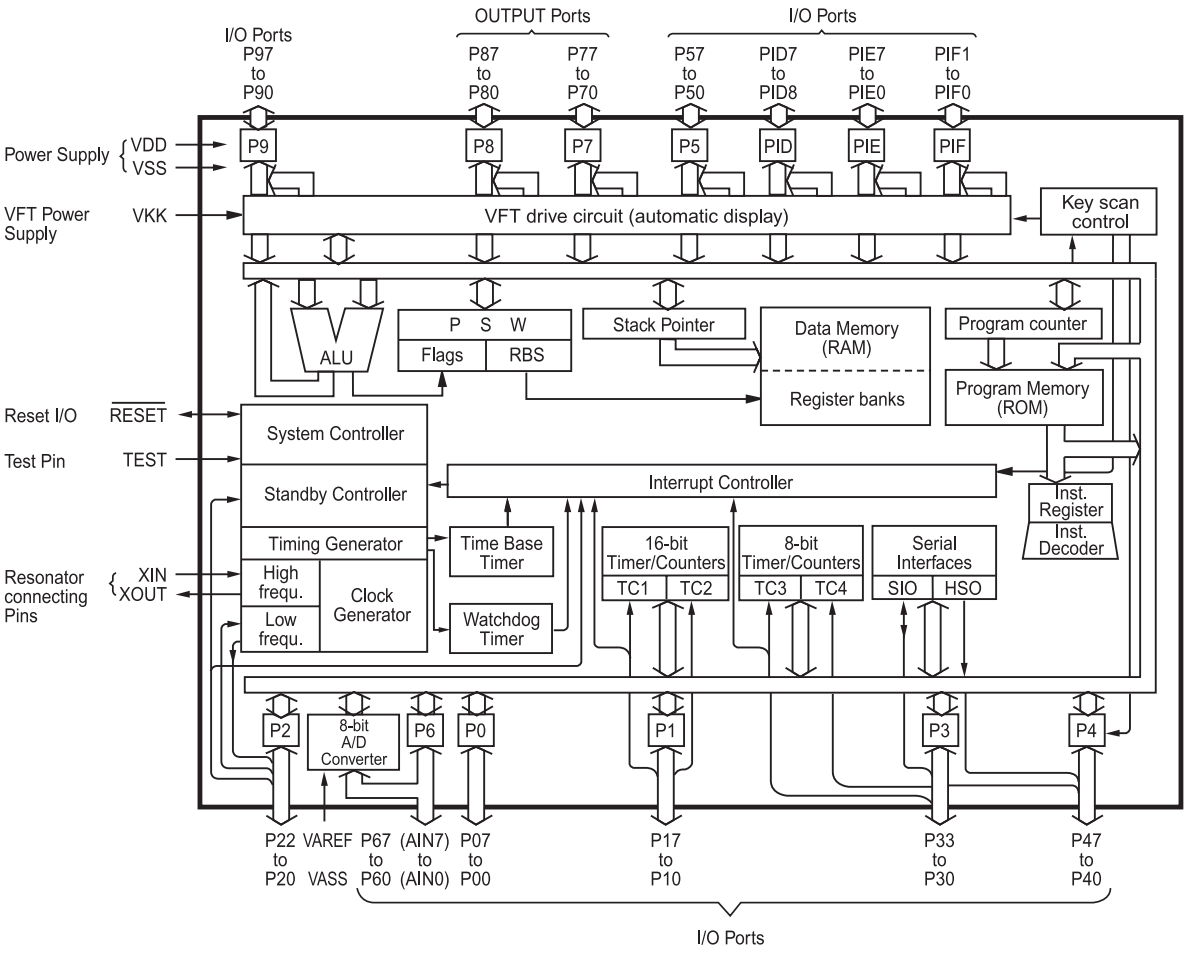
IC 66 PIN FUNCTION (IC : BVITMP87PM78F)(CD)

PIN No.	NAME	I/O	DESCRIPTION
1, 25	VDD	-	POWER SUPPLY (+5V)
2	BUS 0	I/O	BUS for CD DATA
3	BUS 1	I/O	BUS for CD DATA
4	BUS 2	I/O	BUS for CD DATA
5	BUS 3	I/O	BUS for CD DATA
6	BUCK	I/O	BUS for CD CLOCK
7	CCE	I/O	BUS for CD CHIP ENABLE
8	CDRE	O	RESET for CD
9	MUTE	O	MUTE for CD SINGLE
10	SIO CLOCK	I/O	BUS for CD DATA
11	SIO OUT	I/O	
12	SIO IN	I/O	
13	HREQ	I/O	
22,23,27,30	VSS	-	GND
31	X IN	I	8MHz CRYSTAL CONNECTING TERMINAL
32	X OUT	O	
33	RESET	I	SYSTEM RESET
42	A	O	PLL DATA CONTROL PORT
43	B	O	
44	C	O	
45	D	O	
46	DSP POWER	O	CD POWER ON/OFF
83	UN CLAMP SW	I	MECHANISM SW CONDITION
84	T.U HEIGHT SW	I	
85	HOLDER MODE SW	I	
86	T.U HEIGHT SW	I	
87	HOLDER HEIGHT SW	I	
88	LOAD/CLAMP	I	
89	OPEN SW	I	
90	CLOSE/HP SW	I	
91	DISC ON SW	I	
92	DISC CENTER SW	I	

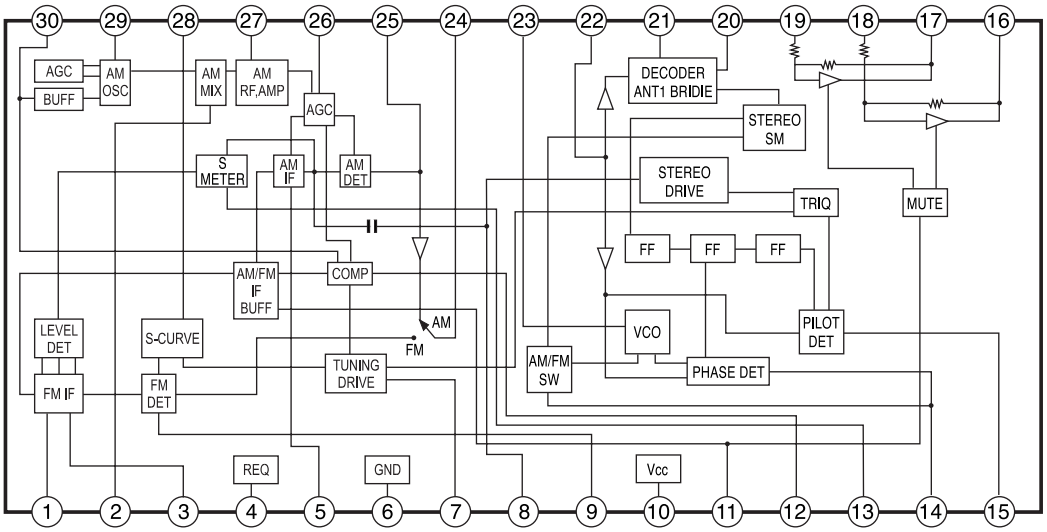
PIN ASSIGNMENTS (TOP VIEW)



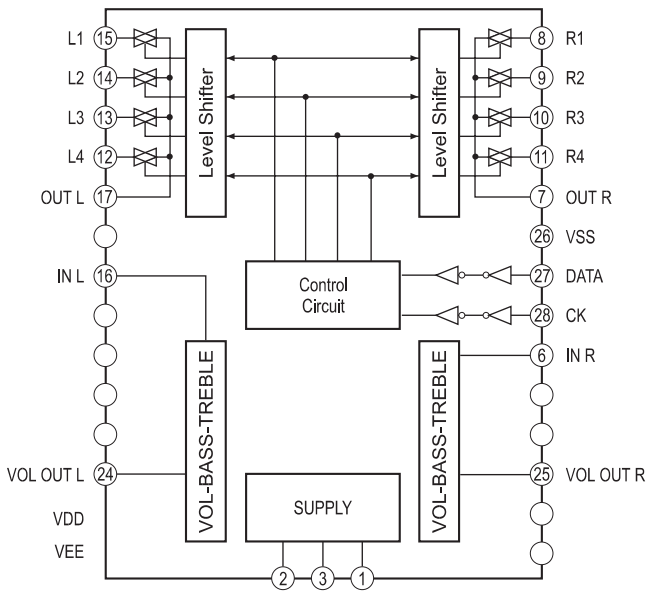
PIN BLOCK DIAGRAM



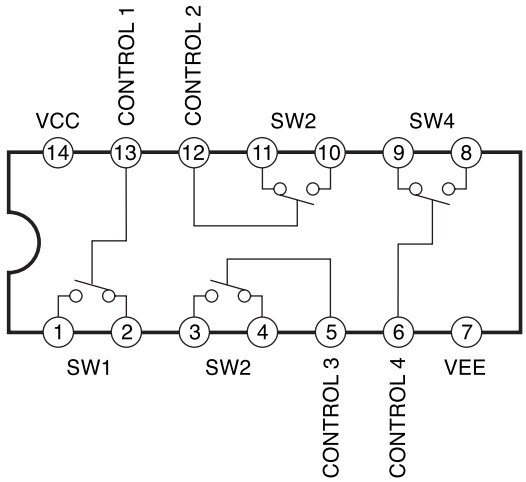
IC11 (TUNER) LA1836M BLOCK DIAGRAM



TDA7318D



IC23(INPUT) LC4966



■ ALIGNMENT INSTRUCTIONS

EQUIPMENT NEEDED:

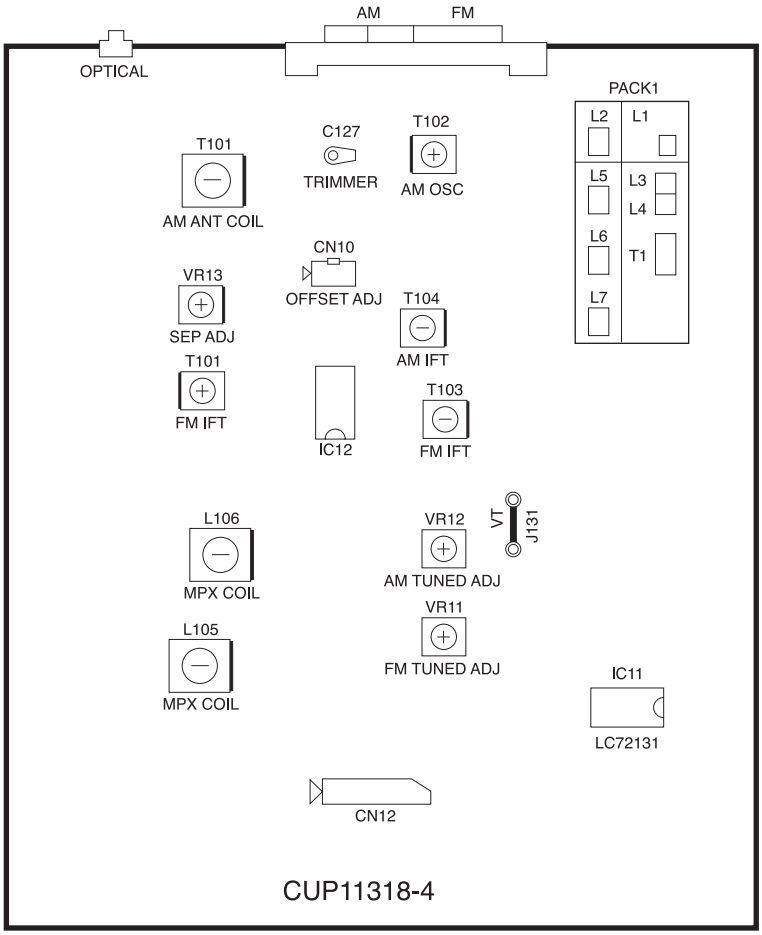
AM Signal Generator
FM Signal Generator
Oscilloscope
VTVM(AC, DC)
Test loop antenna (AW Adjustment)
Dummy antenna (FM Adjustment)
Stereo signal modulator
Frequency counter
Distortion analyser

IMPORTANT

1. Check power-source voltage.
2. Set the function switch to band aligned.
3. Keep the signal input as low as possible to adjust accurately.
4. Modulation and modulation frequency.

Item / Band	Modulation	Modulation frequency
AM	30%	400Hz
FM	100%(75KHz Dev.)	400Hz

■ ADJUSTMENT POINT

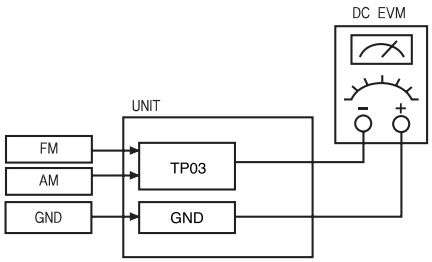


CUP11318-4

MEASUREMENTS AND ADJUSTMENTS

1. FM, AM TRACKING VOLTAGE ADJUSTMENTS

(FM, AM) DC VOLTMETER ..... CONNECT TO TEST POINT TP1 and GND

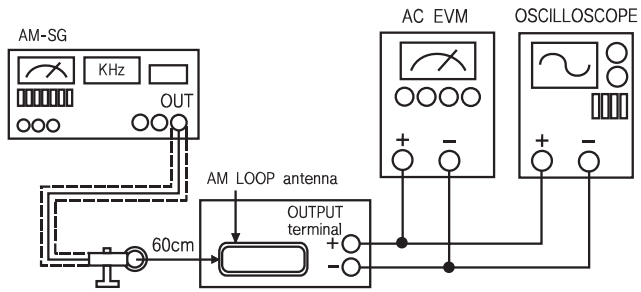


NO.	Band	Frequency	Adjust for	Adjustment
1	FM	87.50MHz	1.5V	L7
2	AM	530KHz	1V	T404

2. AM RF ADJUSTMENT

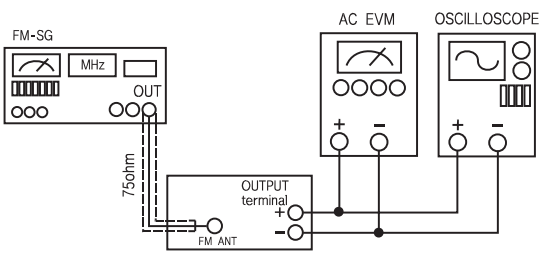
Signal Generator ..... Connects to the AM ANT. Coil through the loop antenna.
Adjust for the indication of VTVM of the wave form of scope to be maximum.

BAND	Step	Frequency	Adjust for	Adjustment
AM	1	610KHz	Maximum sensitivity	T104, L105
	2	1510KHz	Maximum sensitivity	C107
	3	Repeat steps 1 and 2 several times.		



3. FM-RF ADJUSTMENT

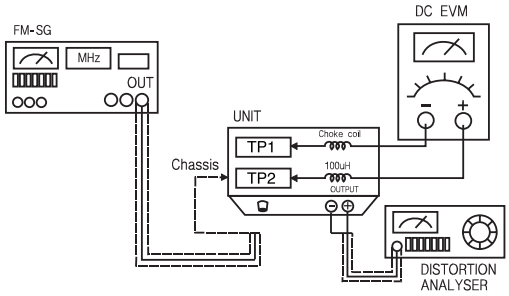
Signal Generator ..... Connect to FM ANT JACK (FM IN) through the dummy.



NO.	Frequency	Adjust for	Adjustment
1	90.10MHz	Maximum Sensitivity	L2, L5, L6
2	Repeat step 1 several times.		

4. FM MONO DISTORTION ADJUSTMENT

DC VOLT METER.....Connect to TP1(-), TP2(+) Through the choke coll (100㎌H)
Signal Generator.....Connect to FM ANT Jack (FM IN) through the dummy.
Distortion Meter.....Connect to the output.



NO.	Frequency	Adjust for	Adjustment
1	100.10MHz	DC Voltmeter 0V	T103
2	100.10MHz	Minimum T.H.D	T103
3	Repeat steps 1 and 2 Several times.		

5. FM/AM AUTO STOP LEVEL ADJUSTMENT

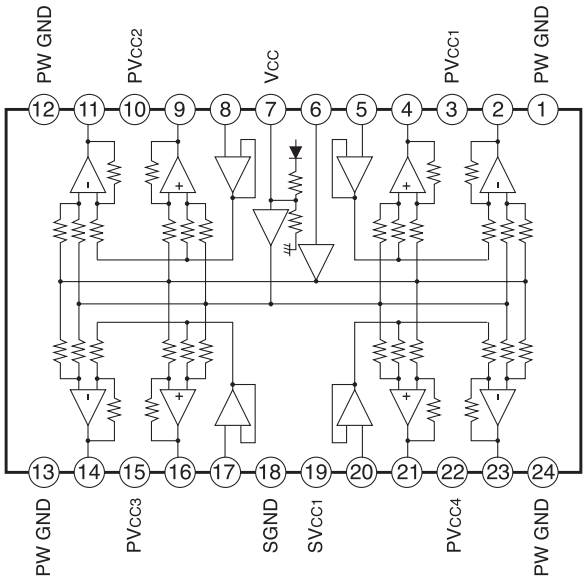
FM SIGNAL GENERATOR .....Connect to FM ANT Jack (FM IN) through the dummy
AM SIGNAL GENERATOR.....Connect to AM ANT, Coil through the Loop antenna

BAND	STEP	SIGNAL GENERATOR	Adjust for	Adjustment
FM	1	100.1MHz 30dB	TUNED Display OFF	VR12
	2	100.1MHz 30dB	TUNED Display ON	VR12
AM	1	1000KHz 80dB	TUNED Display OFF	VR11
	2	1000KHz 80dB	TUNED Display ON	VR11

TA2092N (POWER DRIVER)

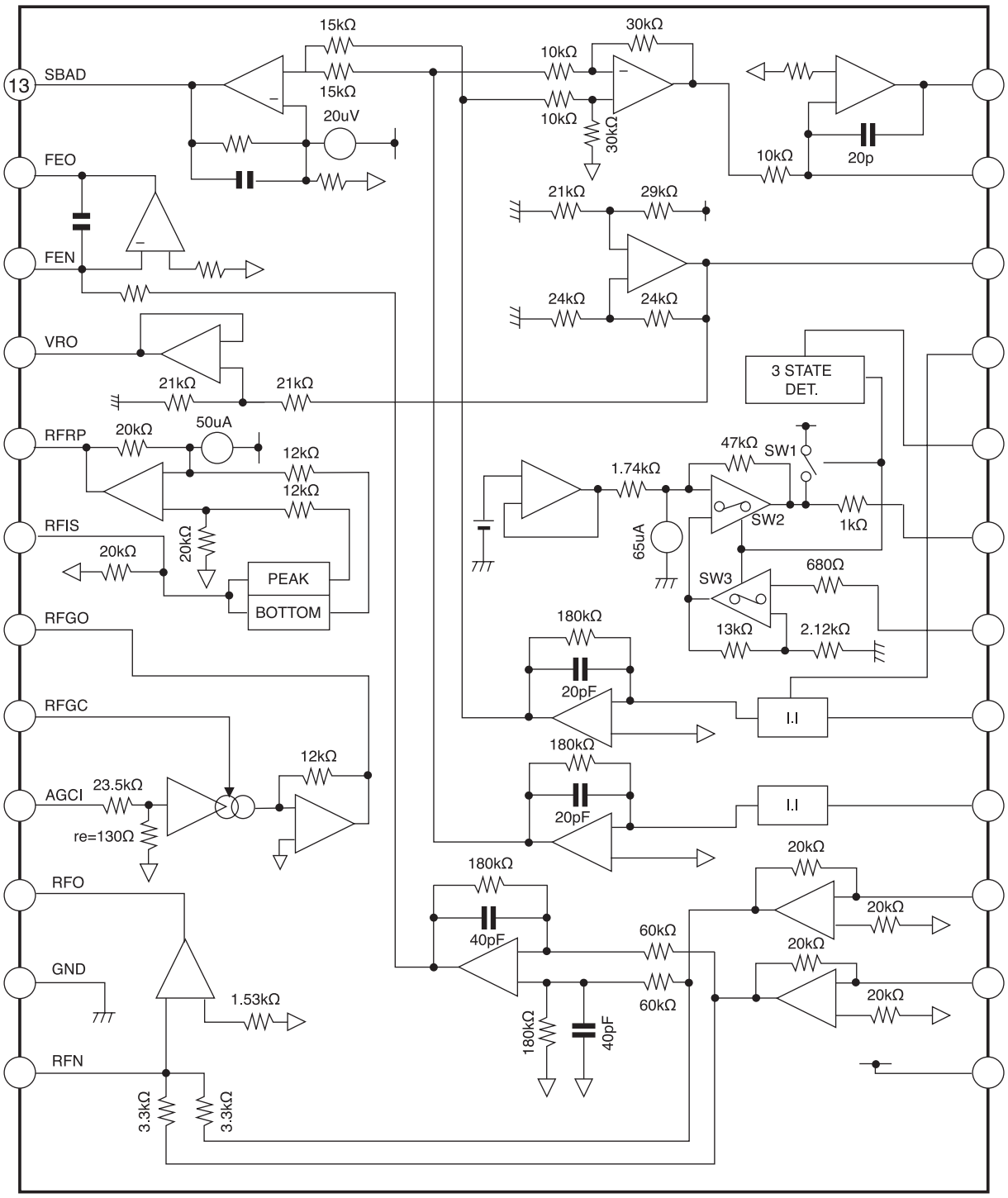
PIN No.	NAME	DESCRIPTION
1	PW GND	Power GND Connected to substrate. ①, ⑫, ⑬, ㉔ pin are connected inside.
2	OUT (-) 1	Inverted output for CH1
3	PV_{CC1}	Supply terminal of output stage for CH1 Supply terminal of output stage are not connected to other channel terminal.
4	OUT (+) 1	Non-inverted output for CH1
5	V_{IN1}	Input for CH1. Not biased inside
6	V_{RI}	Input reference voltage Under condition of $V_{RI} \leqq 1.8V$, internal bias circuit is shut off. No signal input condition : $V_{RI} = V_{IN}$
7	V_{CI}	Output reference voltage. $V_{OUT} = V_{CI} = (V_{CC}-V_F)/2$
8	V_{IN2}	Input for CH2
9	OUT (+) 2	Non-inverted output for CH2
10	PV_{CC2}	Supply terminal of output stage for CH2
11	OUT (-) 2	Inverted output for CH2
12	PW GND	Power GND
13	PW GND	Power GND
14	OUT (-) 3	Inverted output for CH3
15	PV_{CC3}	Supply terminal of output stage for CH3
16	OUT (+) 3	Non-inverted output for CH3
17	V_{IN3}	Input for CH3
18	S GND	Supply terminal of small signal GND
19	S V_{CC}	Small signal GND
20	V_{IN4}	Input for CH4
21	OUT (+) 4	Non-invered output for CH4
22	PV_{CC4}	Supply terminal of output stage for CH4
23	OUT (-) 4	Inverted output for CH4
24	PW GND	Power GND

BLOCK DIAGRAM

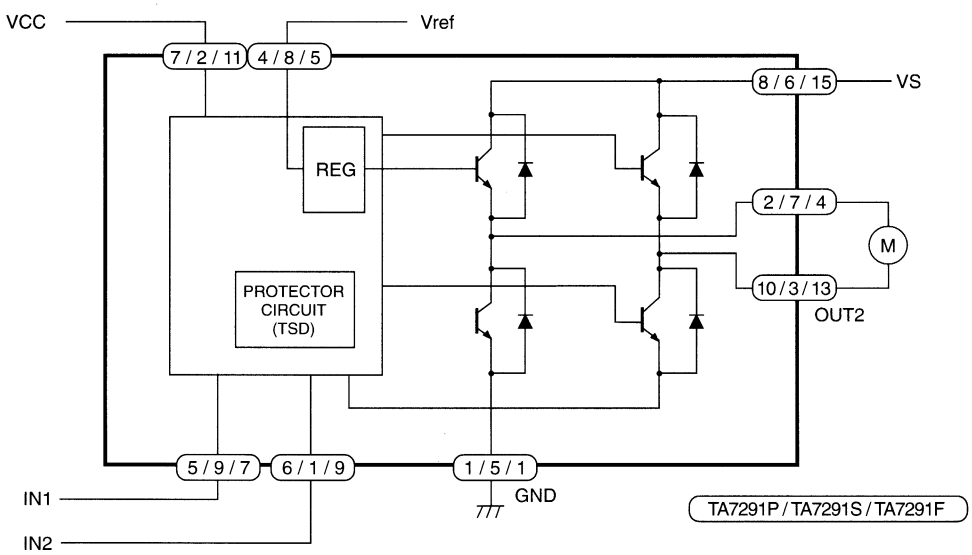


TA2109F (RF/DIGITAL SERVOR)

PIN No.	NAME	I/O	DESCRIPTION	REMARK
1	VCC	-	Power supply input terminal	-
2	FNI	I	Main beam I-V amp input terminal	Connected to pin diode A,C
3	FPI	I	Main beam I-V amp input terminal	Connected to pin diode B,D
4	TPI	I	Sub beam I-V amp input termianl	Connected to pin diode F
5	TNI	I	Sub beam I-V amp input termianl	Connected to pin diode E
6	MDI	I	Monitor phono diode amp input terminal	Connected to monitor photo diode
7	LDO	O	Laser diode amp output terminal	Connected to laser control circuit
8	SEL	I	Laser diode control signal input terminal and APC circuit ON/OFF control signal input terminal	3 signal input (Vcc, Hi-Z, GND)
9	TEB	I	Tracking error balance adjustment signal input terminal. Controlled by 3 PWM signal (PWM carrier = 88.2 kHz)	3 signal input (2 VREF, VR, GND)
10	2VRO	O	Reference voltage (2 VREF) output terminal 2 VREF = 4.2V when Vcc = 5V	-
11	TEN	I	TE amp negative input terminal	Connected to TEO through feedback register
12	TEO	O	TE error signal output terminal	-
13	SBAD	O	Sub beam adder signal output terminal	-
14	FEO	O	Focus error signal output terminal	-
15	FEN	I	FE amp negative input terminal	Connected to FEO through feedback register
16	VRO	O	Reference voltage (VREF) output terminal VREF = 2.1V when Vcc = 5V	-
17	RFRP	O	Track count signal output terminal	-
18	RFIS	I	RFRP detect circuit input terminal	Connected to RFO through condenser
19	RFGO	O	RF gain signal output terminal	-
20	RFGC	I	RF amplitude adjustment control signal input terminal. Controlled by 3 PWM signal (PWM carrier = 88.2 kHz)	3 signal input (2 VREF, VR, GND)
21	AGCI	I	RF signal amplitude adjustment amp input terminal	Connected to RFO through condenser
22	RFO	O	RF signal output terminal	-
23	GND	-	Ground terminal	-
24	RFN	I	RF amp negative input terminal	-


13
SBAD
FEO
FEN
VRO
RFRP
RFIS
RFGO
RFGC
AGCI
RFO
GND
RFN
15kΩ
15kΩ
20uV
30kΩ
10kΩ
10kΩ
30kΩ
10kΩ
20p
21kΩ
29kΩ
24kΩ
24kΩ
3 STATE
DET.
21kΩ
21kΩ
20kΩ
50uA
12kΩ
12kΩ
20kΩ
20kΩ
PEAK
BOTTOM
47kΩ
SW1
1.74kΩ
SW2
1kΩ
65uA
SW3
680Ω
13kΩ
2.12kΩ
180kΩ
20pF
I.I
180kΩ
20pF
I.I
12kΩ
23.5kΩ
re=130Ω
180kΩ
40pF
20kΩ
20kΩ
20kΩ
20kΩ
60kΩ
60kΩ
180kΩ
40pF
1.53kΩ
3.3kΩ
3.3kΩ

TA7291S (Bridge Driver)



PIN No.			SYMBOL	FUNCTIONAL DESCRIPTION
P	S	F		
7	2	11	Vcc	Supply voltage terminal for Logic
8	6	15	Vs	Supply voltage terminal for motor drive
4	8	5	Vref	Supply voltage terminal for control
1	5	1	GND	GND terminal
5	9	7	IN1	Input terminal
6	1	9	IN2	Input terminal
2	7	4	OUT1	Output terminal
10	3	13	OUT2	Output terminal

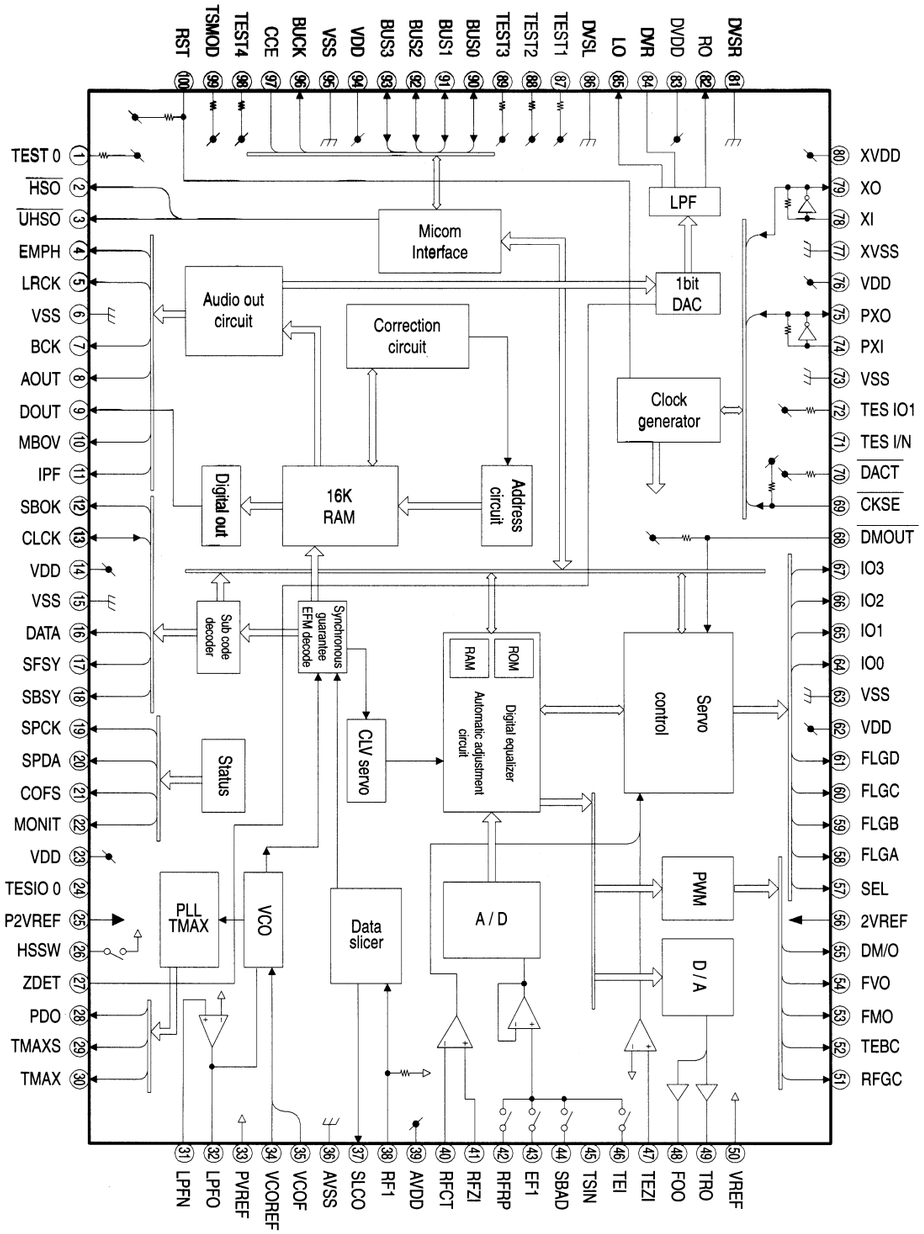
- P Type : PIN ③, ⑨ : NC
- S Type : PIN 4 : NC
- F Type : PIN ②, ③, ⑥, ⑧, ⑩, ⑫, ⑭, and ⑯ : NC
- For F Type, We recommend FIN to be connected to the GND.

TC9432AF (Digital Signal Processor)

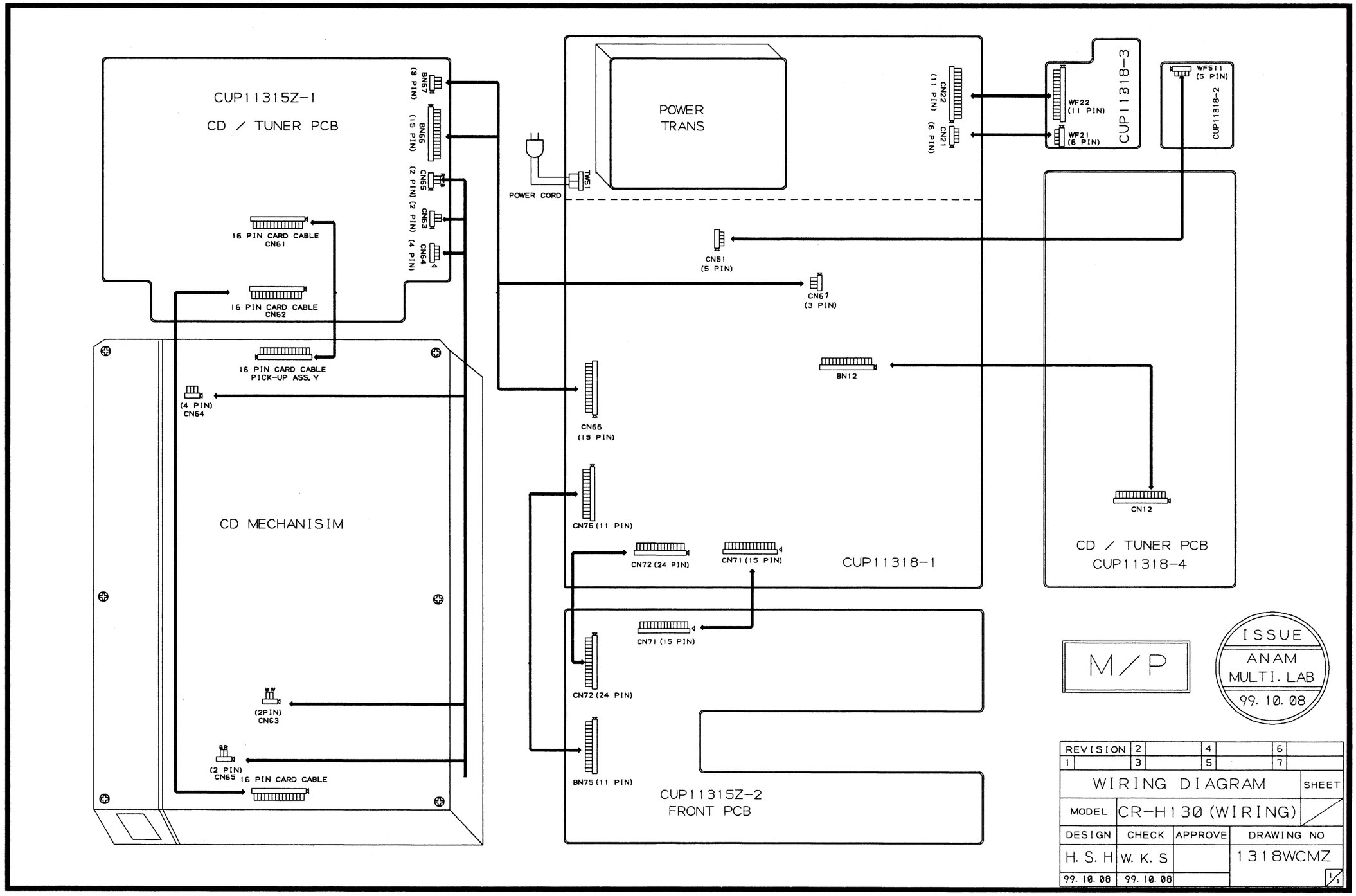
PIN No.	NAME	I/O	FUNCTIONAL DESCRIPTION	REMARKS
1	TEST0	-	Test mode terminal. Normally, keep at open.	With pull-up resistor.
2	$\overline{HSO}$	O	Playback speed mode flag output terminal. $\overline{UHSO}$ / $\overline{HSO}$ / PLAYBACK SPEED H / H / Normal H / L / 2 times L / H / 4 times L / L / -	-
3	$\overline{UHSO}$	O		
4	EMPH	O	Subcode Q data emphasis flag output terminal. Emphasis ON at "H" level and OFF at "L" level. The output polarity can invert by command.	-
5	LRCK	O	Channel clock output terminal. (44.1 kHz) L-ch at "L" level and R-ch at "H" level. The output polarity can invert by command.	-
6	VSS	-	Digital GND terminal.	-
7	BCK	O	Bit clock output terminal. (1.4112 MHz)	-
8	AOUT	O	Audio data output terminal.	-
9	DOUT	O	Digital data output terminal.	-
10	MBOV	O	Buffer memory over signal output terminal. Over at "H" level.	-
11	IPF	O	Correction flag output terminal. At "H " level, AOUT output is made to correction impossibility by C2 correction processing.	-
12	SBOK	O	Subcode Q data CRCC check adjusting result output terminal. The adjusting result is OK at "H" level.	-
13	CLCK	I/O	Subcode P~W data readout clock input/output terminal. This terminal can select by command bit.	-
14	VDD	-	Digital power supply voltage terminal.	-
15	VSS	-	Digital GND terminal.	-
16	DATA	O	Subcode P~W data output terminal.	-
17	SFSY	O	Playback frame sync signal output terminal.	-
18	SBSY	O	Subcode block sync signal output terminal.	-
19	SPCK	O	Processor status signal readout clock output terminal.	-
20	SPDA	O	Processor status signal output terminal.	-
21	COFS	O	Correction frame clock output terminal. (7.35 kHz)	-
22	MONIT	O	Internal signal (DSP internal flag and PLL clock) output terminal. Selected by command.	-
23	VDD	-	Digital power supply voltage terminal.	-
24	TESIO0	I	Test input/output terminal. Normally, keep at "L" level.	-
25	P2VREF	-	PLL double reference voltage supply terminal.	-
26	HSSW	O	2/4 times speed at "VREF" voltage.	2-state output (PVREF,HiZ)
27	ZDET	O	1 bit DA converter zero detect flag output terminal.	-
28	PDO	O	Phase difference signal output terminal of EFM signal and PLCK signal.	3-state output (P2VREF,PVREF,VSS)
29	TMAXS	O	TMAX detection result output terminal. Selected by command bit (TMPS).	-
30	TMAX	O	TMAX detection result output terminal. Selected by command bit (TMPS). DIFFERENCE RESULT / TMAX OUTPUT Longer than fixed ferq. / "P2VREF" Shorter than fixed freq. / "VSS" Within the fixed freq. / "HiZ"	3-state output (P2VREF,HiZ,VSS)

PIN No.	NAME	I/O	FUNCTIONAL DESCRIPTION	REMARKS
31	LPFN	I	LPF amplifier inverting input terminal for PLL.	Analog input.
32	LPFO	O	LPF amplifier output terminal for PLL.	Analog output.
33	PVREF	-	PLL reference voltage supply terminal.	-
34	VCOREF	I	VCO center frequency reference level terminal. Normally, keep at "PVREF" level.	-
35	VCOF	O	VCO filter terminal.	Analog output.
36	AVSS	-	Analog GND terminal.	-
37	SLCO	O	Data slice level output terminal.	Analog output.
38	RFI	I	RF signal input terminal.	Analog input (Zin : selected by command)
39	AVDD	-	Analog power supply voltage terminal.	-
40	RFCT	I	RFRP signal center level input terminal.	Analog input (Zin : 50kΩ)
41	RFZI	I	RFRP zero cross input terminal.	Analog input.
42	RFRP	I	RF ripple signal input terminal.	Analog input.
43	FEI	I	Focus error signal input terminal.	Analog input.
44	SBAD	I	Sub-beam adder signal input terminal.	Analog input.
45	TSIN	I	Test input terminal. Normally, keep at "VREF" level.	Analog input.
46	TEI	I	Tracking error signal input terminal. Track in at tracking servo on.	Analog input.
47	TEZI	I	Trcaking error zero cross input terminal.	Analog input (Zin : 10kΩ)
48	FOO	O	Focus servo equalizer output terminal.	Analog output (2VREF~AVSS)
49	TRO	O	Tracking servo equalizer output terminal.	
50	VREF	-	Analog reference voltage supply terminal.	-
51	RFGC	O	RF amplitude adjustment control signal output terminal.	3-state PWM signal output. (2VREF, VREF, VSS) (PWM carrier = 88.2 kHz)
52	TEBC	O	Tracking balance control signal output terminal.	
53	TEBC	O	Feed equalizer output terminal.	
54	TEBC	O	Speed error signal or feed search equalizer output terminal.	
55	DMO	O	Disk equalizer output terminal. (PWM carrier = 88.2 kHz for DSP, Synchronize to PXO)	3-state PWM signal output.(2VREF, VREF, VSS)
56	2VREF	-	Analog double reference voltage supply terminal.	-
57	SEL	O	APC circuit ON/OFF indication signal output terminal. At the laser on time, UHF = L at "HiZ" level and UHF = H at "H" level.	-
58	FLGA	O	Extemal flag output terminal for internal signal. Can select signal from TEZC, $\overline{FOON}$, $\overline{FOK}$ and RFZC by command.	-
59	FLGB	O	Extemal flag output terminal for internal signal. Can select signal from $\overline{DECT}$, $\overline{FOON}$, $\overline{FMON}$ and RFZC by command.	-
60	FLGC	O	Extemal flag output terminal for internal signal. Can select signal from TRON, $\overline{TRSR}$, $\overline{FOK}$ and $\overline{SRCH}$ by command.	-
61	FLGD	O	Extemal flag output terminal for internal signal. Can select signal from $\overline{TRON}$, $\overline{DMON}$, HYS and $\overline{SHC}$ by command.	-
62	VDD	-	Digital power supply voltage terminal.	-
63	VSS	-	Digital GND terminal.	-
64	IO0	I/O	General I/O terminal. Can change over input port or output port by command. At the input mode time can readout a state of terminal (H/L) by read command. At the output mode time can control a state of terminal (H/L/HiZ) by command.	-
65	IO1			
66	IO2			
67	IO3			

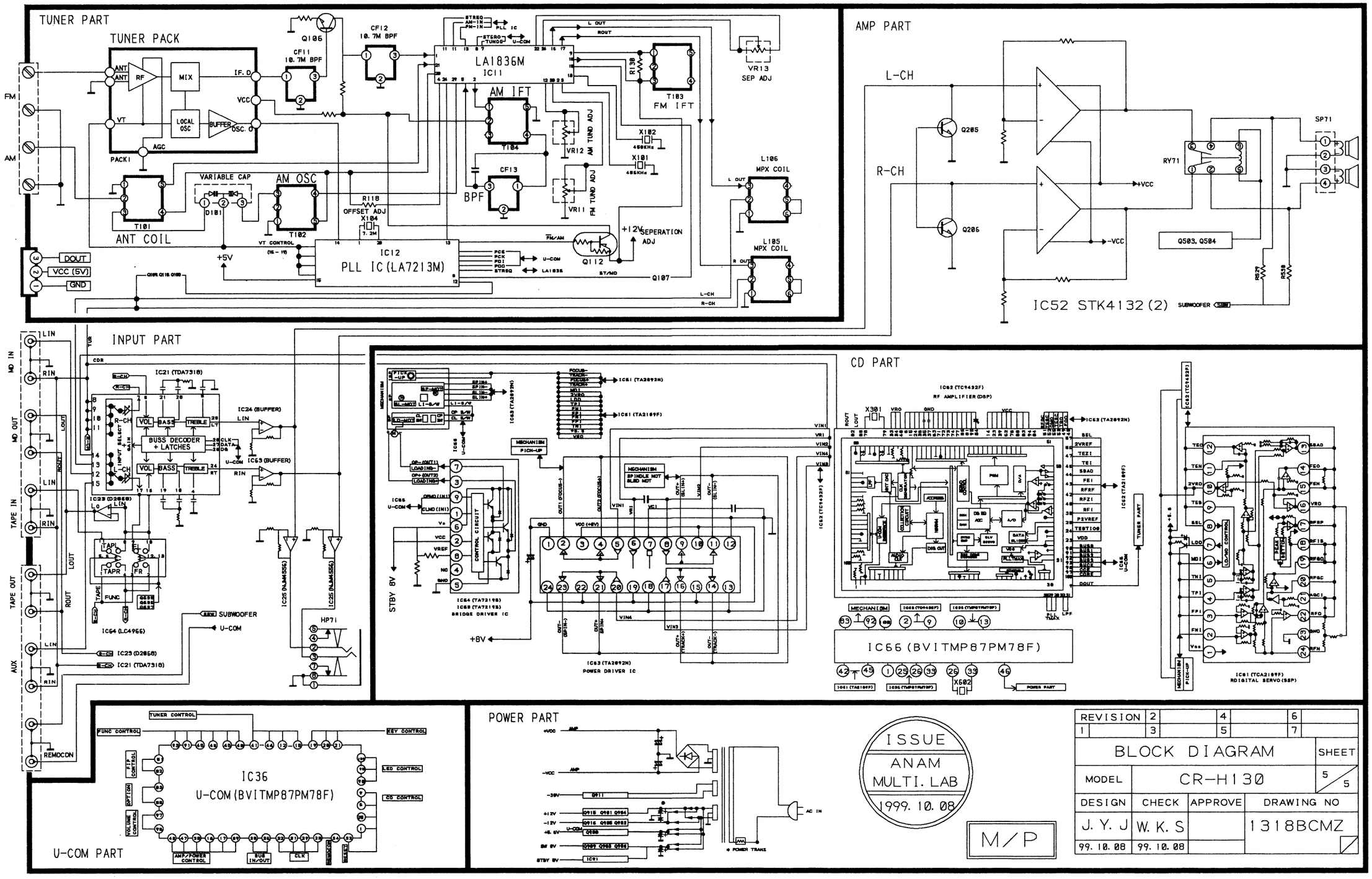
PIN No.	NAME	I/O	FUNCTIONAL DESCRIPTION	REMARKS
68	$\overline{\text{DMOUT}}$	I	This terminal controls IO0~IO3 terminal. At "L" level time, IO0, 1 out feed equalizer signal of 2-state PWM. IO2, 3 out disk equalizer signal of 2-state PWM.	With pull-up resistor.
69	$\overline{\text{CKSE}}$	I	Normally, keep at open.	With pull-up resistor.
70	$\overline{\text{DACT}}$	I	DAC test mode terminal. Normally, keep at open.	With pull-up resistor.
71	TESIN	I	Test input terminal. Normally, keep at "L" level.	Analog input.
72	TESIO1	I	Test input/output terminal. Normally, keep at "L" level.	Analog input.
73	VSS	-	Digital GND terminal.	-
74	PXI	I	Crystal oscillator connecting input terminal for DSP. Normally, keep at "L" level.	-
75	PXO	O	Crystal oscillator connecting output terminal for DSP.	
76	VDD	-	Digital power supply voltage terminal.	-
77	XVSS	-	Oscillator GND terminal for system clock.	-
78	XI	I	Crystal oscillator connecting input terminal for system clock.	-
79	XO	O	Crystal oscillator connecting output terminal for system clock.	-
80	XVDD	-	Oscillator power supply voltage terminal for system clock.	-
81	DVSR	-	Analog GND terminal for DA converter. (R-ch)	-
82	RO	O	R channel data forward output terminal.	-
83	DVDD	-	Analog supply voltage terminal for DA converter.	-
84	DVR	-	Reference voltage terminal for DA converter.	-
85	LO	O	L channel data forward output terminal.	-
86	DVSL	-	Analog GND terminal for DA converter. (L-ch)	-
87	TEST1	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
88	TEST2	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
89	TEST3	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
90	BUS0	I/O	Micom interface data input/output terminal.	Schmit input. With pull-up resistor.
91	BUS1	I/O		
92	BUS2	I/O		
93	BUS3	I/O		
94	VDD	-	Digital Ppower supply voltage terminal.	-
95	VSS	-	Digital GND terminal.	-
96	BUCK	I	Micom interface clock input terminal.	Schmit input.
97	$\overline{\text{CCE}}$	I	Command and data sending/receiving chip enable signal input terminal. The bus line becomes active at "L" level.	Schmit input.
98	TEST4	I	Test mode terminal. Normal, keep at open.	With pull-up resistor.
99	$\overline{\text{TSMOD}}$	I	Local test mode selection terminal.	With pull-up resistor.
100	$\overline{\text{RST}}$	I	Reset signal input terminal. Reset at "L" level.	With pull-up resistor.


RST 100
TSMOD 99
TEST4 98
CCE 97
BUCK 96
VSS 95
VDD 94
BUS3 93
BUS2 92
BUS1 91
BUS0 90
TEST3 89
TEST2 88
TEST1 87
DVSL 86
LO 85
DVR 84
DVDD 83
RO 82
DVSR 81
TEST 0 1
HSO 2
UHSO 3
EMPH 4
LRCK 5
VSS 6
BCK 7
AOUT 8
DOUT 9
MBOV 10
IPF 11
SBOK 12
CLCK 13
VDD 14
VSS 15
DATA 16
SFSY 17
SBSY 18
SPCK 19
SPDA 20
COFS 21
MONIT 22
VDD 23
TESIO 0 24
P2VREF 25
HSSW 26
ZDET 27
PDO 28
TMAXS 29
TMAX 30
LPFN 31
LPFO 32
PVREF 33
VCOREF 34
VCOF 35
AVSS 36
SLCO 37
RF1 38
AVDD 39
RFCT 40
RFZI 41
RFRP 42
EF1 43
SBAD 44
TSIN 45
TEI 46
TEZI 47
FOO 48
TRO 49
VREF 50
RFGC 51
TEBC 52
FMO 53
FVO 54
DM/O 55
2VREF 56
SEL 57
FLGA 58
FLGB 59
FLGC 60
FLGD 61
VDD 62
VSS 63
IO0 64
IO1 65
IO2 66
IO3 67
DMOUT 68
CKSE 69
DACT 70
TES I/N 71
TES IO1 72
VSS 73
PXI 74
PXO 75
VDD 76
XVSS 77
XI 78
XO 79
XVDD 80
Micom Interface
LPF
1bit DAC
Audio out circuit
Correction circuit
Clock generator
Digital out
16K RAM
Address circuit
Sub code decoder
Synchronous guarantee EFM decode
Status
CLV servo
RAM
ROM
Automatic adjustment circuit
Digital equalizer
Servo control
PLL TMAX
VCO
Data slicer
A / D
PWM
D / A

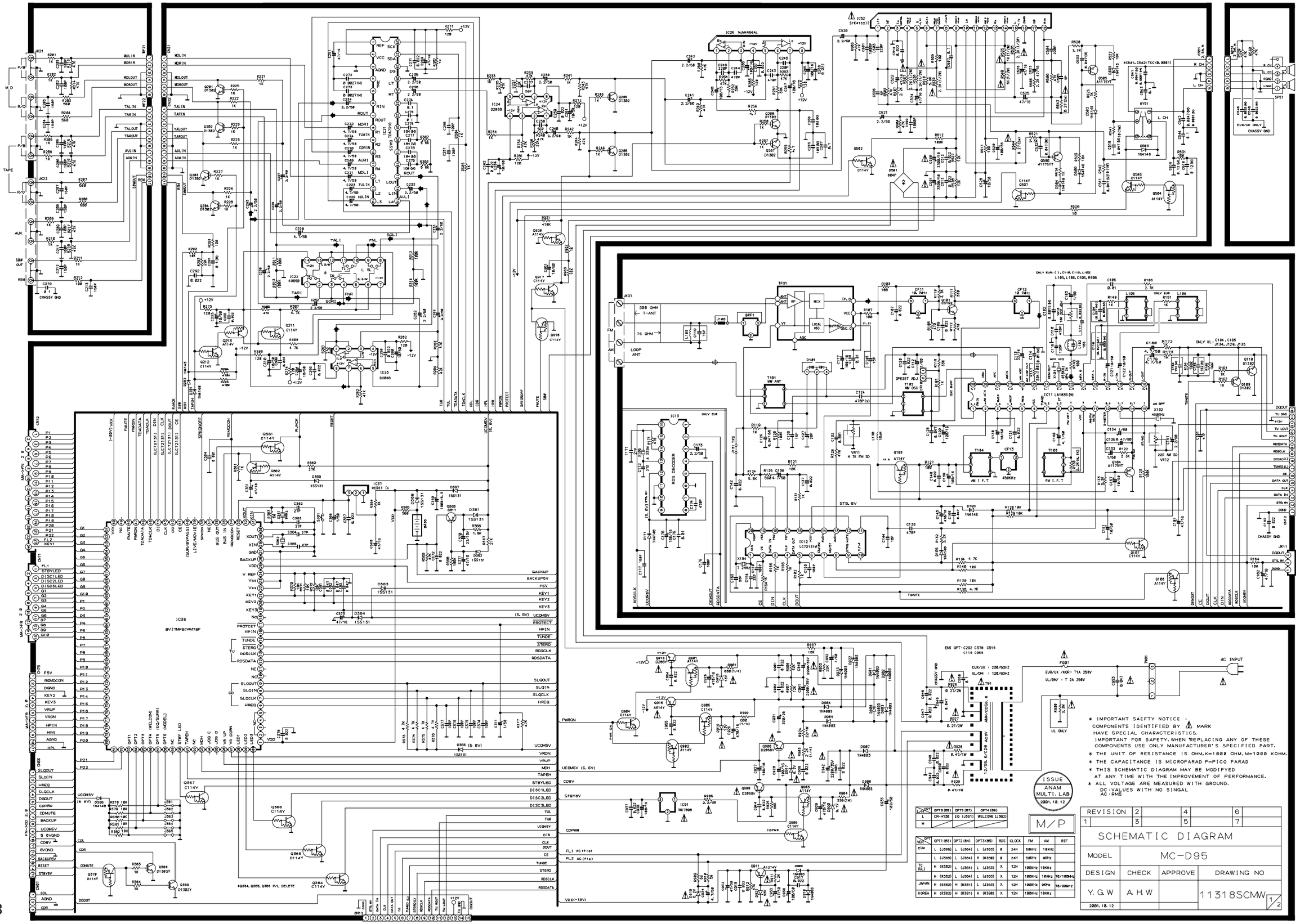
WIRING DIAGRAM



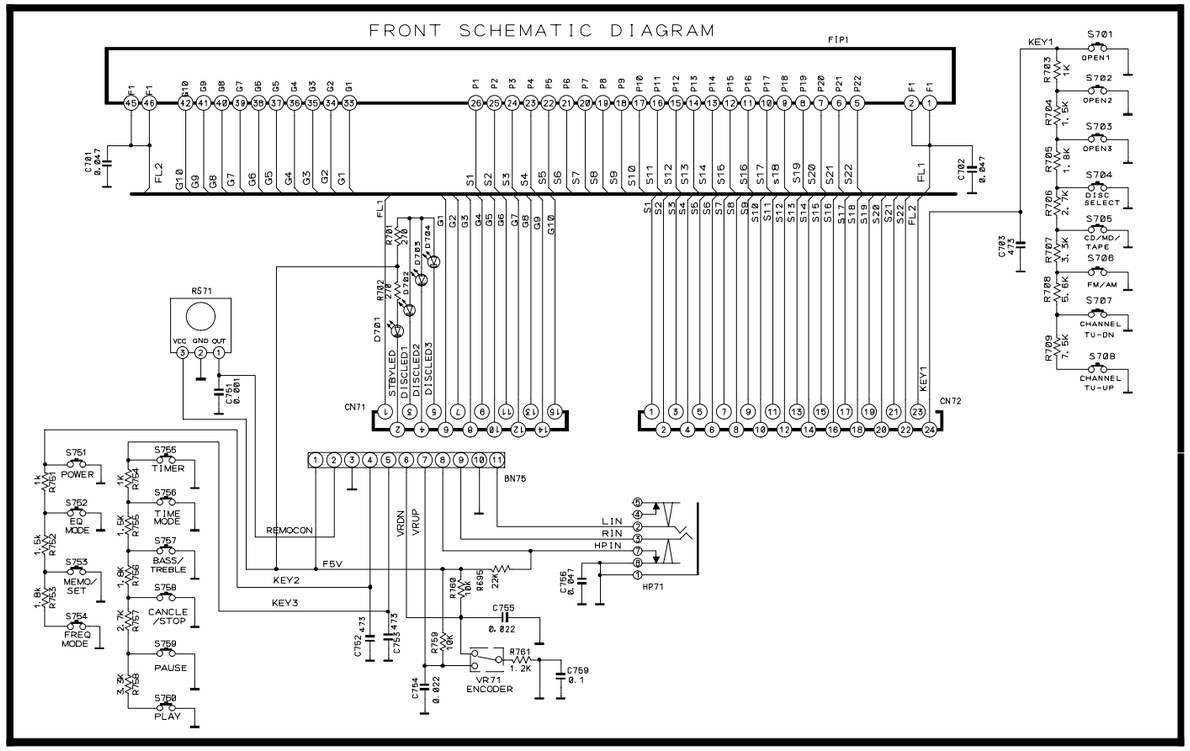
BLOCK DIAGRAM

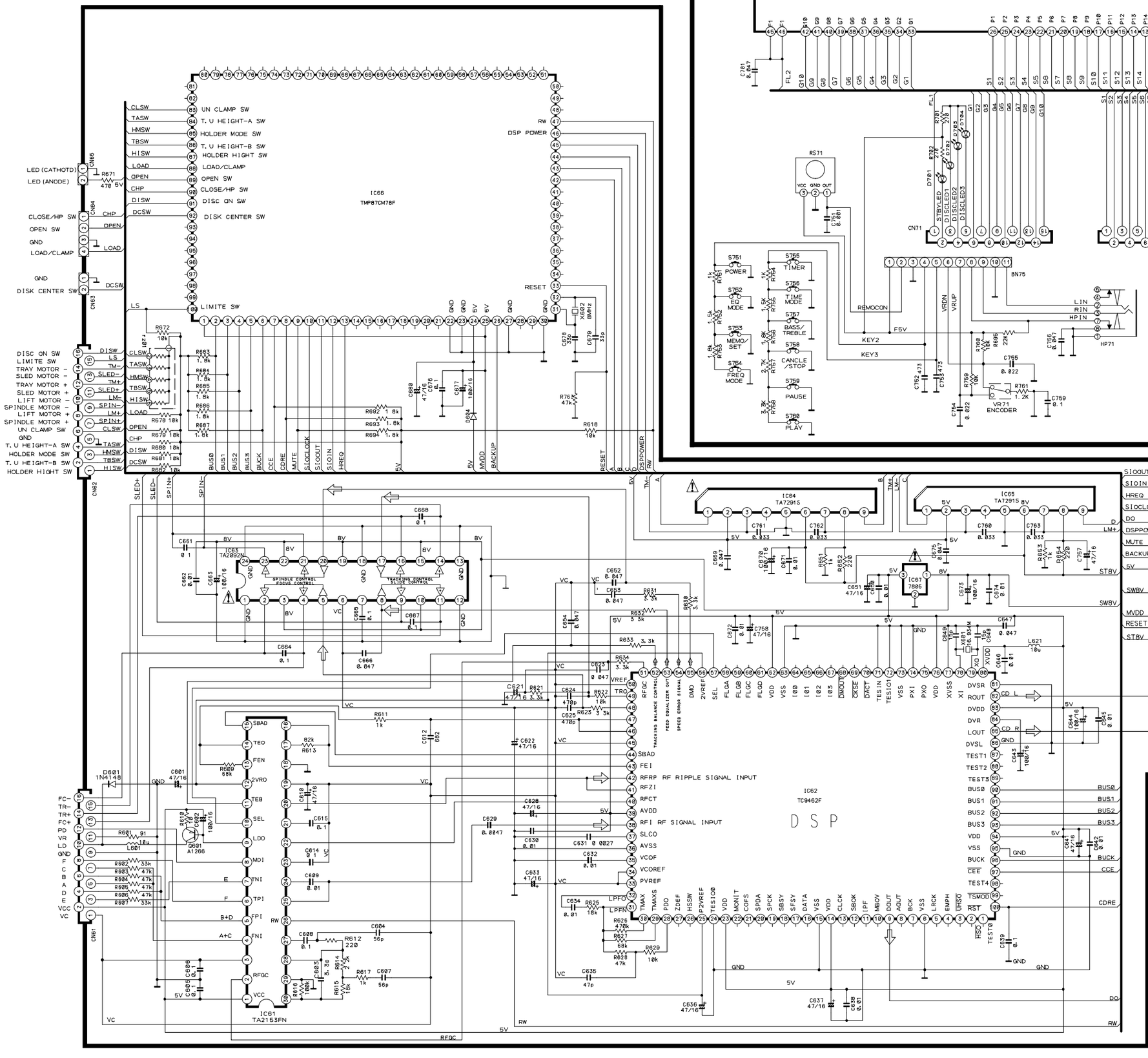


SCHEMATIC DIAGRAM



FRONT SCHEMATIC DIAGRAM





** IMPORTANT SAFETY NOTICE. COMPONENTS IDENTIFIED BY ⚠ MARK HAVE SPECIAL CHARACTERISTICS. IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY MANUFACTURER'S SPECIFIED PARTS.

** THE UNIT OF RESISTANCE IS OHM. K=1000 OHM, M=1000 KOHM

** THE UNIT OF CAPACITANCE IS MICROFARAD (uF) pF=10^-6 uF

** THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE

ISSUE
ANAM MULTI. LAB
2001. 10. 12

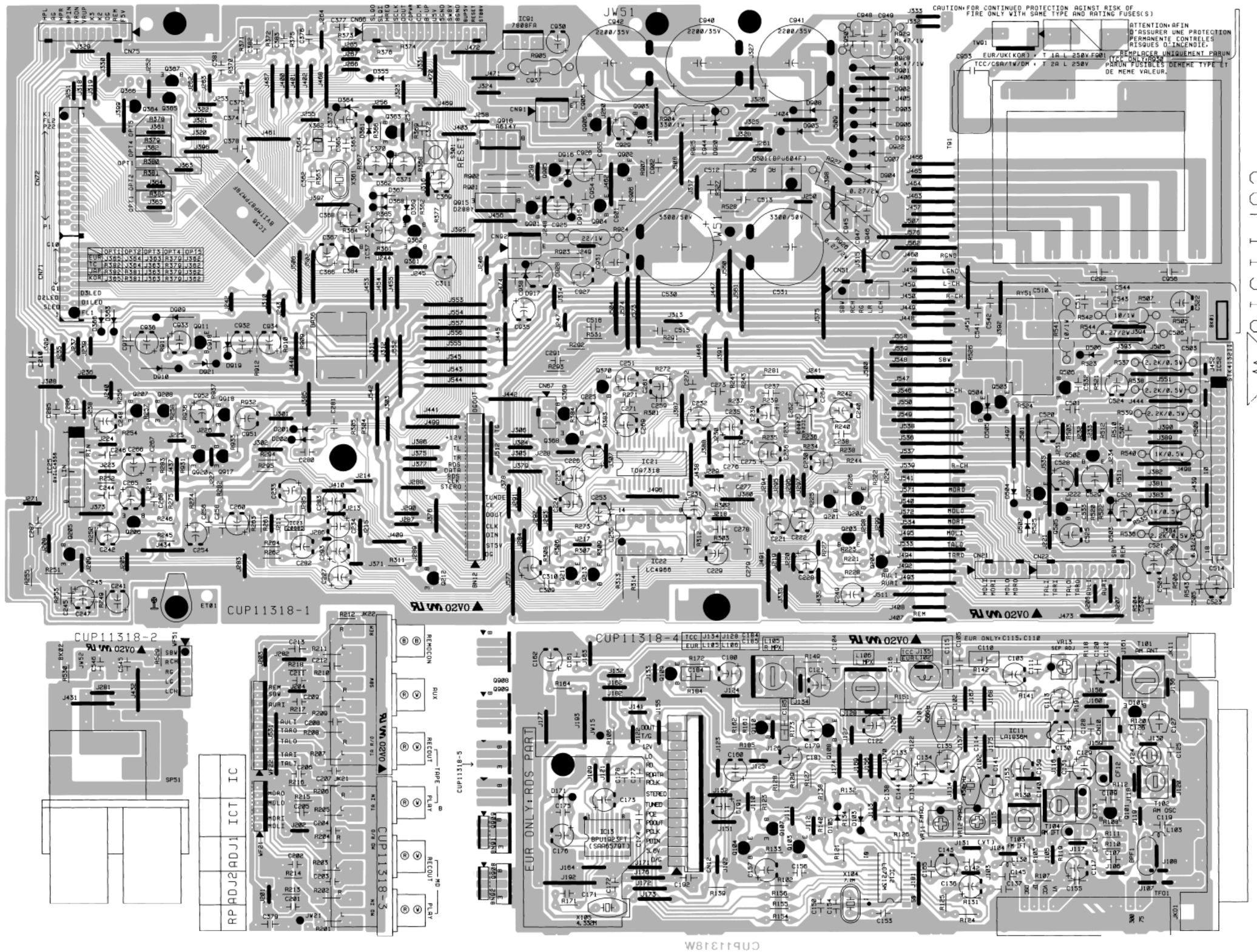
M/P

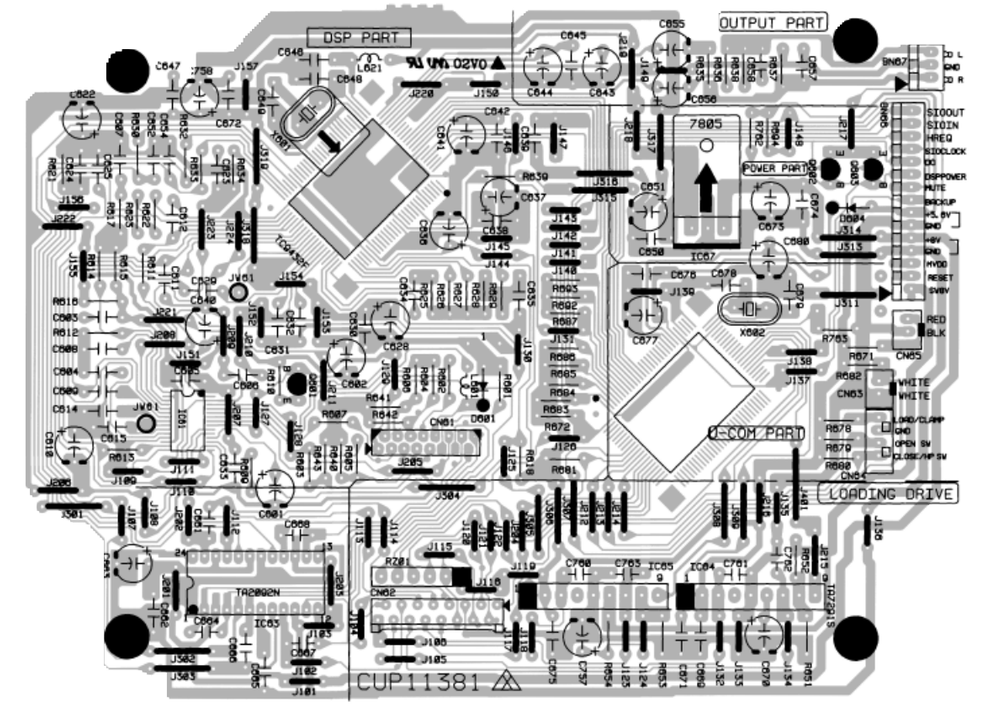
REVISION	2	4	6	
1	3	5	7	

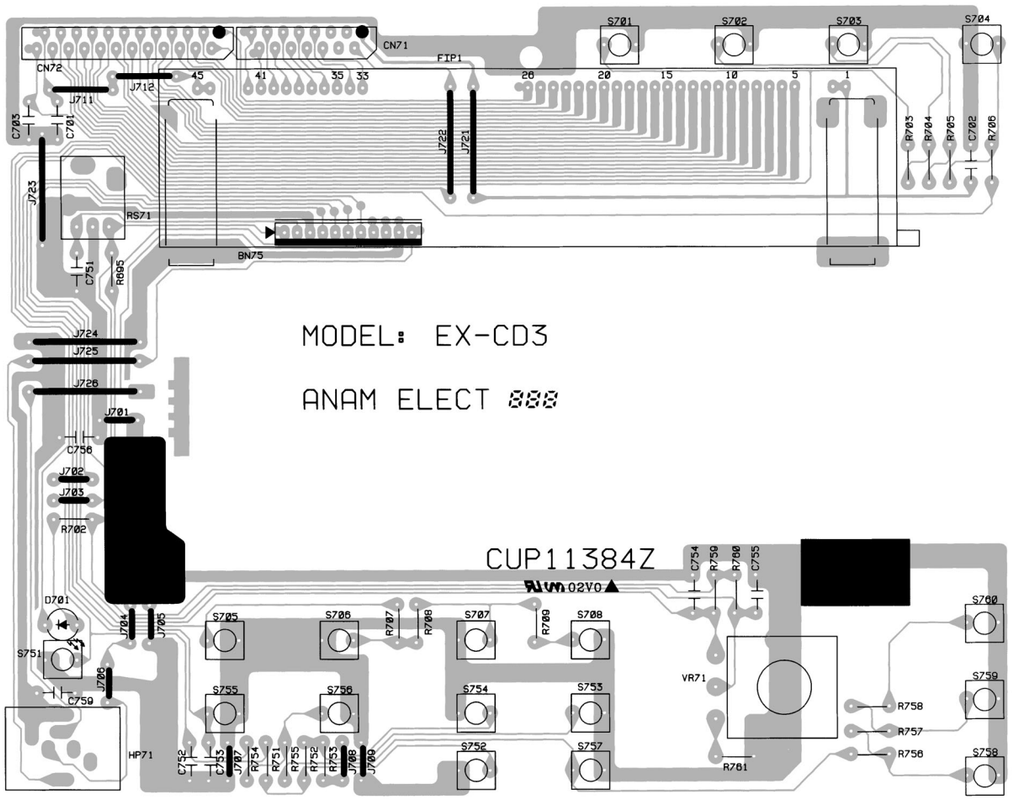
SCHEMATIC DIAGRAM — SHEET

MODEL	MC-D95		
DESIGN	CHECK	APPROVE	DRAWING NO
Y. G. W	A. H. W		1381SCMW (CD) 1492SUPZ (FRONT)
2001. 10. 12			

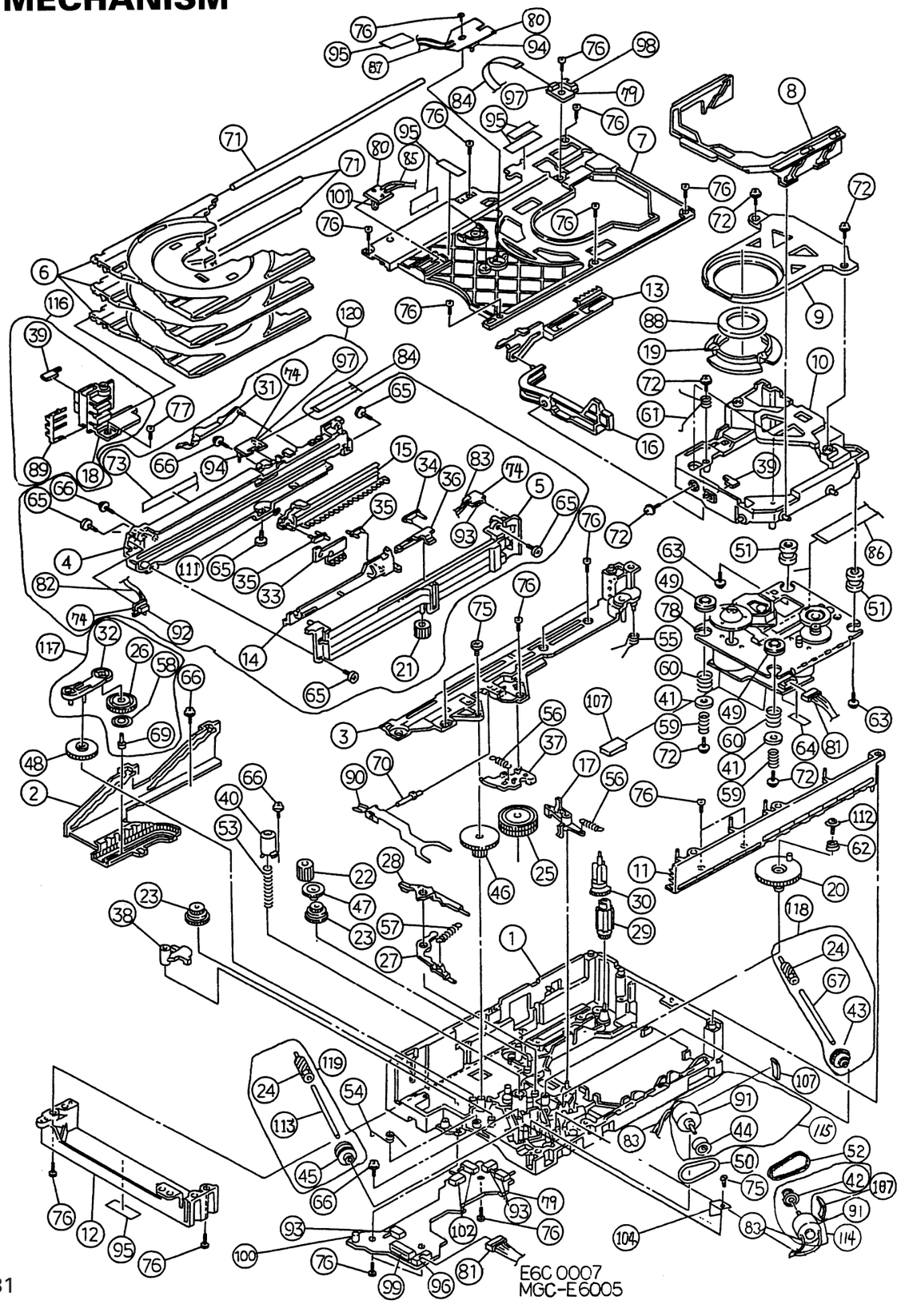
PRINTED CIRCUIT BOARDS




DSP PART
OUTPUT PART
POWER PART
D-COM PART
LOADING DRIVE
7805
X602
CUP11381
SIOOUT
SIOIN
HREQ
SIOCLOCK
DSPPOWER
MUTE
BACKUP
+5.0V
GND
+8V
HVDD
RESET
SWRV
RED
BLK
WHITE
WHITE
LOAD/CLAMP
GND
OPEN SW
CLOSE/MP SW


MODEL: EX-CD3
ANAM ELECT
CUP11384Z
CN71
CN72
FIP1
RS71
HP71
VR71

MECHANISM



MECHANISM VIEW-1 [MGC-E6005]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1- 1	9A08349800	CHASSIS (MAIN)	E6A 3011
1- 2	9A08349900	SLIDER (LIFT-L)	E6B 3032
1- 3	9A08350000	SUB CHASSIS (L)	E6B 3038
1- 4	9A08350100	HOLDER (LOAD-B)	E6B 3030
1- 5	9A08350200	HOLDER (LOAD-A)	E6B 3029
1- 6	9A08350300	TRAY	E6B 3043
1- 7	9A08350400	HOLDER (TOP)	E6A 3033
1- 8	9A08350500	SLIDER (TU)	E6B 3031
1- 9	9A08350600	HOLDER (CLAMP)	E6C 3022
1-10	9A08350700	FRAME (TU-A)	E6B 3021
1-11	9A08350900	SUB CHASSIS (R)	E6B 3020
1-12	9A08351000	BRACKET (M)	E6B 3044
1-13	9A08351100	SLIDER (CLAMP)	E6C 3017
1-14	9A08351200	SLIDER (LOAD)	E6C 3025
1-15	9A08351300	SLIDER (OPEN)	E6C 3024
1-16	9A08351400	LEVER (CLAMP)	E6C 3034
1-17	9A08351500	LEVER (SW4)	E6C 3036
1-18	9A08351600	HOLDER (SHAFT)	E6C 3039
1-19	9A08351800	CLAMPER	E6C 3041
1-20	9A08351900	CAM (TU)	E6C 3014
1-21	9A08352100	GEAR (LOAD-A)	E6D 3001
1-22	9A08352200	GEAR (LOAD-B)	E6D 3002
1-23	9A08352400	GEAR (HELICAL)	E6D 3004
1-24	9A08352500	GEAR (WORM)	E6D 3005
1-25	9A08352600	GEAR (IDLER-B)	E6D 3007
1-26	9A08352700	GEAR (FRICTION)	E6D 3008
1-27	9A08352800	LEVER (SW5)	E6D 3012
1-28	9A08352900	LEVER (SW6)	E6D 3013
1-29	9A08353000	GEAR (TU)	E6D 3015
1-30	9A08353100	GEAR (ZENEBA)	E6D 3016
1-31	9A08353200	LEVER (CLOSE SWITCH)	E6D 3018
1-32	9A08353300	ARM (FRICTION)	E6D 3019
1-33	9A08353400	SLIDER (CENTER)	E6D 3023
1-34	9A08353500	LEVER (LIMIT-A)	E6D 3026
1-35	9A08353600	LEVER (LIMIT-B)	E6D 3027
1-36	9A08353700	SLIDER (TRAY)	E6D 3028
1-37	9A08353800	SLIDER (SW-8)	E6D 3035
1-38	9A08353900	LEVER (SW-7)	E6D 3037
1-39	9A08354000	ARM (TRAY LOCK)	E6D 3040
1-40	9A08354100	GUIDE (DISC)	E6D 3042
1-41	9A08354200	COLLAR (SPRING)	E6D 3045
1-42	9A08354300	MOTOR PULLEY (TIMING)	E6D 3058
1-43	9A08354400	PULLEY (TIMING)	E6D 3059
1-44	9A08354500	PULLEY (MOTOR-A)	E6D 3006
1-45	9A08354600	PULLEY (MOTOR)	C3D 3009
1-46	9A08354700	GEAR (CENTER-B)	E6D 3010
1-47	9A08354800	GEAR (IDLER)	E6D 3003
1-48	9A08354900	GEAR (CENTER-A)	E6D 3009
1-49	9A08355000	INSULATOR	C3D 4003
1-50	9A08355100	BELT (LIFT)	E6D 4003

MECHANISM VIEW-1 [MGC-E6005]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1-51	9A08355300	INSULATOR	E6D 4004
1-52	9A08355400	BELT (TIMING)	E6D 4005
1-53	9A08355600	COMPRESSION SP (GUIDE)	E6D 6001
1-54	9A08355700	TORSION SPRING (LOCK)	E6D 6002
1-55	9A08355800	TORSION SPRING (ZENEBA)	E6D 6003
1-56	9A08355900	EXTENSION SP (SWITCH)	E6D 6004
1-57	9A08356000	EXTENSION SPRING (CAM)	E6D 6005
1-58	9A08356100	COMPRESSION SP (FRICTION)	E6D 6006
1-59	9A08356200	COMPRESSION SP (TU-A)	E6D 6007
1-60	9A08356300	COMPRESSION SP (TU-B)	E6D 6008
1-61	9A08356500	TORSION SP (ASSIST-A)	E6D 6009
1-62	9A08356600	COMPRESSION SP (CAM)	E6D 6012
1-63	9A08356800	SCREW (B)	E1D 8002
1-64	9A08356900	SOFT TAPE	E1D 8003
1-65	9A08357100	SCREW (TRAY)	E1D 8004
1-66	9A08357200	SCREW (A2)	E1D 8012
1-67	9A08357400	SHAFT (WORM-A)	E1D 8001
1-68		*VACANT*	
1-69	9A08357500	SHAFT (FRICTION)	E6D 8003
1-70	9A08357600	SHAFT (LEVER)	E6D 8004
1-71	9A08357700	SHAFT (TRAY)	E6D 8005
1-72	9A08357800	SCREW (FRAME)	E6D 8006
1-73	9A08369800	COVER (WIRE)	E6D 8007
1-74	9A08357900	PCB (SUB-C)	E6B 9031
1-75	9A08358000	SCREW (SUB-L)	E6D 8011
1-76	9A08358100	BIND TAPPING SCREW 2.6*8	8114512608
1-77	9A08358200	BIND TAPPING SC 2.6*8 (BL)	8114522608
1-78	9A08358300	KCTB1H	D40-1500
1-79	9A08358600	PCB (MAIN-B)	E6B 9021
1-80	9A08358700	PCB (SUB-B)	E6B 9022
1-81	9A08358800	WIRING HARNESS (TU)	E6D 9003
1-82	9A08358900	WIRING HARNESS (SW1)	E6D 9004
1-83	9A08359000	WIRING HARNESS (SW2)	E6D 9005
1-84	9A08359100	4P FFC	E6D 9006
1-85	9A08359300	WIRING HARNESS (LED-C)	E6D 9032
1-86	9A08359400	16P FFC	E6D 9002
1-87	9A08359500	WIRING HARNESS (JAM)	E6D 9018
1-88	9A08359600	MAGNET	T99-0544
1-89	9A08359700	FLAT SPRING	E6D 1002
1-90	9A08359800	LEVER (GUIDE)	E6C 1001
1-91	9A08359900	MOTOR MM05B	91542142
1-92	9A08360000	SWITCH MUP10371MLB0	94081102
1-93	9A08360300	SWITCH MUP10252MLB1	94081103
1-94	9A08360400	SWITCH MUP10184MLB1	94081104
1-95	9A08360500	FILAMENT TAPE W1.5CM	96901032
1-96	9A08360600	CONNECTOR S6B-PH	99054172
1-97	9A08360700	CONNECTOR 04FM-1.0ST	99054177
1-98	9A08360800	CONNECTOR S4B-PH-K-S	99054179
1-99	9A08360900	CONNECTOR 16FE-ST	99054180
1-100	9A08361200	PHOTO TRANSISTOR RPT-38PT3F	99518074

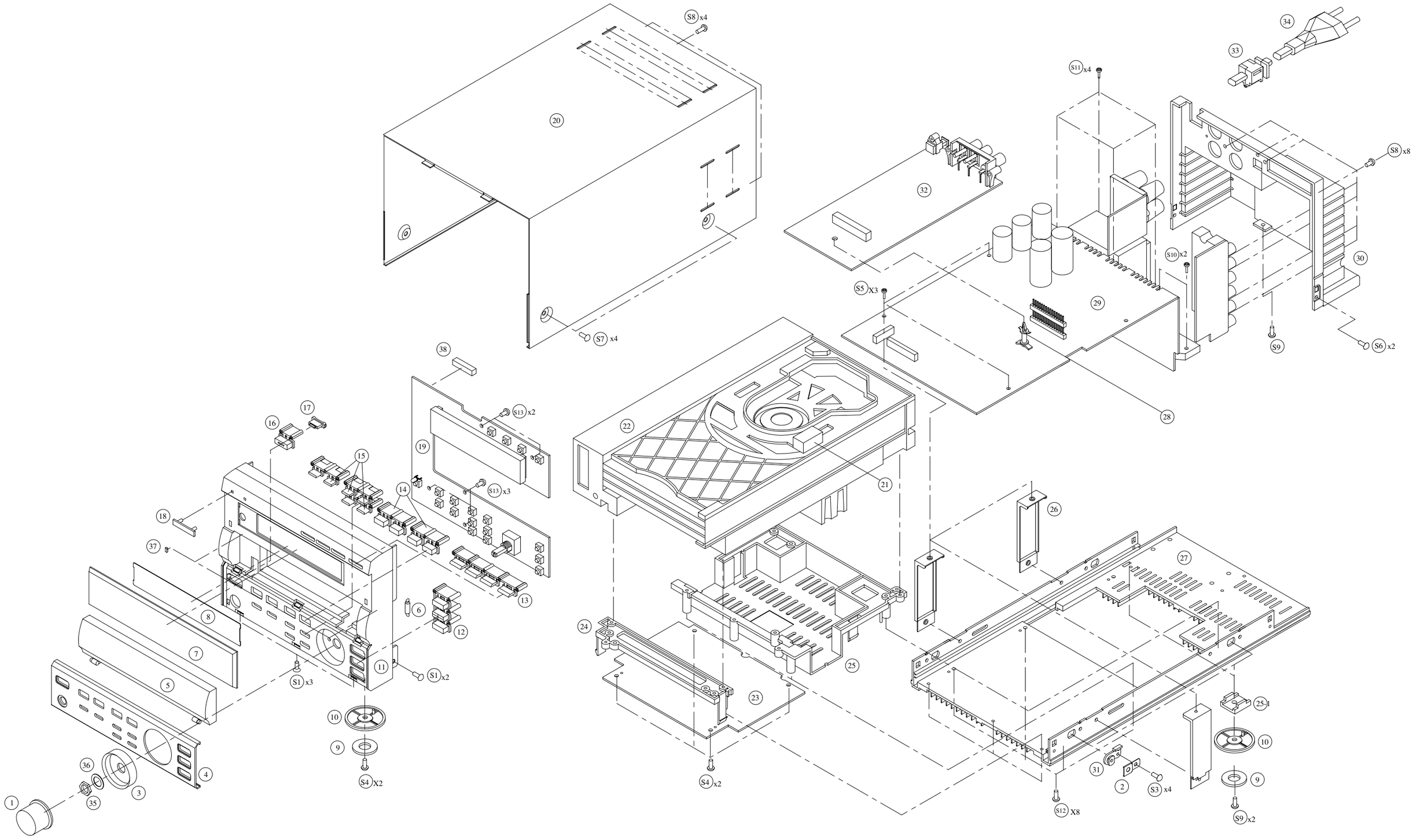
MECHANISM VIEW-1 [MGC-E6005]

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
1-101	9A08361300	LED SIR-33ST3	99518207
1-102	9A08361400	SWITCH SPPB62	S40-1139
1-103		*VACANT*	
1-104	9A08361700	FLAT SPRING (WORM)	E6D 1006
1-105		*VACANT*	
1-106		*VACANT*	
1-107	9A08361800	CUSHION	E1D 8007
1-108		*VACANT*	
1-109		*VACANT*	
1-110		*VACANT*	
1-111	9A08362100	POLYSLIDER WASHER M2.1*M5	8342121030
1-112	9A08362200	SCREW (A3)	E6D 8014
1-113	9A08362300	SHAFT (WORM-C)	E6D 2002
1-114	9A08362400	MOTOR ASSY (E6D 9028)	E6D 9028
1-115	9A08362500	MOTOR ASSY (E6D 9027)	E6D 9027
1-116	9A08362600	HOLDER (SHAFT) ASSY	E6D 3061
1-117	9A08362700	GEAR (FRICTION) ASSY	E6D 3050
1-118	9A08362800	WORM (A) ASSY	E6D 3048
1-119	9A08362900	WORM (B) ASSY	E6D 3049
1-120	9A08363001	HOLDER (LOAD) ASSY	E6A 3060

INCLUDED ACCESSORIES

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A08872200	SPEAKER ASS'Y	CLS-EX3ACCSPKR
	9A08883100	TERMINAL,ANT(USA 75 OHM)	CJJ3G010Z
	9A07871200	REMOCON TRANSMITTER ASS'Y	CARTCR-H100TCCC
	9A08524900	OWNER'S MNL,T/C EX-CD3	CQX1A625Z
	9A08046100	ADAPTOR,75-300 (NTSC)	KLR1T201
	9A08880800	ANT,FM.T(LUG TYPE)	CSA267
	9A08880900	AM LOOP ANTENNA ASS'Y	CSA3A012Z

EXPLODED VIEW EX-CD3TCCC



EXPLODED VIEW-2

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
2- 1	9A08881900	KNOB, VOLUNE	KGX1A294C21
2- 2	9A08879400	PLATE, SHIELD	CMC1A166
2- 3	9A08877700	ORNAMENT, RING	CGX1A302MBC22
2- 4	9A08876600	ORNAMENT, FRONT(AL)	CGK1A058ZC21
2- 5	9A08876800	ORNAMENT, DOOR	CGR1A225M9ZK87
2- 6	9A08877600	SPRING, DOOR	KUS1A124
2- 7	9A08881200	WINDOW, FIP	KGU1A255ZH31
2- 8	9A08881400	FILTER, FIP	KMZ1A072
2- 9	9A07889500	CUSHION, FOOT	KHG1A165
2-10	9A07872900	FOOT	CKL1A059M9K63
2-11	9A08876900	PANEL, FRONT	CGW1A308M9ZK87
2-12	9A08876400	KNOB, BAND	CBT1A767M9ZK87
2-13	9A08876500	KNOB, OPEN	CBT1A768M9K87
2-14	9A08876200	KNOB, TUNING	CBT1A765M9K87
2-15	9A08876300	KNOB, TIMER	CBT1A766M9K87
2-16	9A08876100	KNOB, POWER	CBT1A764M9K87
2-17	9A08876700	INDICATOR, POWER	CGL1A190
2-18	9A08877500	BADGE, TEAC	KGB1A080X
2-19		FRONT PCB ASS'Y EX-CD3	
2-20	9A08879100	CABINET, TOP	CKC1B107S26
2-21	9A06327100	SUPPORT, CUSHION	KHG1A104
2-22	9A08214800	3CD MECHANISM [MGC-E6005]	CJDMGCE6005
2-23		CD PCB ASS'Y EX-CD3	
2-24	9A08215100	SUPPORT, MECHA(A)	CMH1A104
2-25	9A08215200	SUPPORT, MECHA(B)	CMH1A105
2-26	9A08879600	BRACKET, PCB	CMD1A405
2-27	9A08217100	CHASSIS, BOTTOM	CUA1A180
2-28	9A05963800	SUPPORT, PCB	KRE1A018
2-29		MAIN PCB ASS'Y EX-CD3TCCC	
2-30	9A08215000	CABINET, REAR	CKD1A031Z
2-31	9A07873500	LOCKER, TOP	CMH1A088
2-32		PCB TUNER	
2-33	⚠ 9A06754900	BUSHING, AC CORD	KHR1A028
2-34	⚠ 9A07872600	POWER, CORD	CJA523FBY
2-35	9A08875100	NUT	CNE1A001
2-36		WASHER	
2-37	9A08219400	CUSHION, RUBBER	KHG1A172
2-38	9A08219300	SUPPORT, FIP	KHG1A134
S1	9A01397400	SCREW, KTS3+8J	KTS3+8J
S2	9A06871400	SCREW, KTS+10G	KTS3+10G
S3	9A01420500	SCREW, KTB3+8G	KTB3+8G
S4	9A05985100	SCREW, KTW3+10G	KTW3+10G
S5	9A05966100	SCREW, KTW3+6J	KTW3+6J
S6	9A01535800	SCREW, KTB3+8J	KTB3+8J
S7	9A05984200	SCREW, KTB3+8GFZ	KTB3+8GFZ
S8	9A01477900	SCREW, KTB4+12JFZ	KTB4+12JFZ
S9	9A06700000	SCREW, KTW3+10J	KTW3+10J
S10		SCREW	
S11	9A05338800	SCREW, KTB4+6F	KTB4+6F
S12	9A06555100	SCREW, KTB3+12G	KTB3+12G
S13	9A01377400	SCREW, KTB3+10G	KTB3+10G
F 902	⚠ 9A07888700	FUSE 2A, 250V F902	KBA2C2000TLU

■ RESISTORS AND CAPACITORS

Notes : • Part numbers are indicated for most mechanical parts.
Please use this part number for parts order.
- IMPORTANT SAFETY NOTICE.
Components identified by ⚠ mark have special characteristics important for safety.
When replacing any of these components, use only manufacture's specified parts.
- The unit of resistance is OHM(Ω)
K=1000(Ω), M=1000(KΩ)
- The unit of capacitance is MICROFARED(μF)
P=10 $^{-6}$μF

■ Numbering System of Resistor

Example

CRD	25	F	J	101
Type	Wattage	Shape	Tolerance	Value

Resistor Type	Wattage	Tolerance
CRD: Carbon CRG: Metal Oxide CRF:Metal Cement	20:1/5W 25:1/4W 50:1/2W 1:1W 2:2W 3:3W	F:= ±1% J:= ±5% K:= ±10%

■ Numbering System of Capacitor

Example

HCKR	1H	101	K	B
Type	Voltage	Value	Tolerance	Peculiarity

Capacitor Type	Voltage		Tolerance
	ECEA Type	Other	
HCB:Ceramic HCC:Ceramic HCK:Ceramic HCQI:Polyester HCQP:Polypropylene HCQS:Polystyrol	0J:6.3V 1A:10V 1C:16V 1E:25V 1H:50V 1V:35V	1H:50V DC 1:125V DC KC:400V AC	C: ±0.25pF G: ±2% J: ±5% K: ±10% Z: +80%, –20%

MAIN PCB ASS'Y

REF. NO.		PARTS NO.	DESCRIPTION	REMARKS
		9A08879700	MAIN PCB ASS'Y EX-CD3TCCC	COP11318F
		9A08879900	PCB, MAIN CR-H130	CUP11318W
		9A08882300	WIRE ASS'Y CR-H130	CWE8202150AS
BA36	⚠	9A08882500	BATTERY, RECHARGEABLE	HABGP40BVH3A3H
BN12		9A08220200	TERMINAL CR-H130	KJP15TT122ZP
BN91, BN92		9A08882600	WIRE, ASS'Y CR-H130	CWB1C003200BM
C124		9A07886400	CAP, STYROLE	HCQS1H471JZ
C127		9A01405900	C, VARIABLE 20PF A020S12	KCRA020S12
C276- C279		9A08127800	CAP, FILM	KCFE1J184JBT
C287		9A08883800	WIRE, COPPER SN95/PB5,0.6	C3A206
C355		9A08878200	DIODE 1SS133T-77	HVD1SS133MT
C369		9A07882100	CAP, ELECT 1000/6.3V	HCEA0JH102T
C515, C516		9A07046900	CAP, METAL POLYESTER	KCQE1J124KXT
C530, C531	⚠	9A07883600	CAP, ELECT 3300/50V	HCEA1HH332E
C925, C926	⚠	9A07897000	CAP, ELECT HCEA1CH471T	HCEA1CH471T
C929	⚠	9A07897000	CAP, ELECT HCEA1CH471T	HCEA1CH471T
C940- 942	⚠	9A07884300	CAP, ELECT 2200/35V	HCEA1VH222E
C953	⚠	9A08882700	CAP, CERAMIC(KH TYPE) JP	BCKWKH472ME
CF11, CF12		9A06544600	FILTER, CERAMIC E107MSHAT	BVFE107MSHAT
CF13		9A07006300	FILTER CERAMIC PBF450JR3	BVFPFB450JR3
CN10		9A06250600	WAFER 02GA19ZM	KJP02GA19ZM
CN12		9A08220100	HOUSING 42140(15PIN)	KJP15HA37ZM
CN21		9A07889700	WAFER MOLEX35336-0610	KJP06GA98ZM
CN22		9A08219800	WAFER	KJP11GA98ZM
CN51		9A08219600	WAFER 53291(5PIN)	KJP05GA102ZM
CN66		9A06251000	WAFER	KJP15GA19ZM
CN67		9A05938500	WAFER, 3P	KJP03GA19ZM
CN71		9A08220000	WAFER, CARD CABLE	KJP15GA115ZG
CN72		9A08220500	WAFER, CARD CABLE	KJP24GA115ZG
CN75		9A05330900	WAFER MOLEX-53014	KJP11GA19ZM
CN91, CN92		9A05329100	WAFER MOLEX 5267-03A	KJP03GA01ZM
D101		9A08163000	DIODE, VARICAP	HVDSVC342LT
D103, D105		9A08878200	DIODE 1SS133T-77	HVD1SS133MT
D201, D202		9A08878200	DIODE 1SS133T-77	HVD1SS133MT
D361- D364		9A08878200	DIODE 1SS133T-77	HVD1SS133MT
D366- D370		9A08878200	DIODE 1SS133T-77	HVD1SS133MT
D501		9A06224900	DIODE , BRIDGE PBU604F	BVDPBU604F
D502- D506		9A08878200	DIODE 1SS133T-77	HVD1SS133MT
D901- D910		9A05194700	DIODE, 1N4003ST	KVD1N4003ST
D915, D916	⚠	9A07886900	DIODE, ZENER 13V ZENER	HVDMTZJ13BT
D917, D919	⚠	9A07887100	DIODE, ZENER 6.2V ZENER	HVDMTZJ6.2BT
D920	⚠	9A08884000	DIODE, ZENER	HVDMTZJ9.1BT
D921	⚠	9A07887000	DIODE, ZENER 33V 1/2W	HVDMTZJ33BT
D922, D923		9A05194700	DIODE, 1N4003ST	KVD1N4003ST
F901		9A05328200	HOLDER, FUSE KJCFC5S	KJCFC5S
IC11		9A08163100	IC, (IF+MPX) LA1836M	HVILA1836M
IC12		9A08163300	IC, PLL LC72131M	HVILC72131M
IC21		9A08882800	I.C, (VOLUME+FUNCTION)	HVITDA7318D
IC22		9A05971200	IC., LC4966	BVILC4966
IC23, IC24		9A08882900	I.C, OP AMP NJM2068M	HVINJM2068M
IC25		9A08163500	IC, NJM4556AL	HVINJM4556AL
IC36		9A08883000	I.C, U-COM(MAIN)	HVIANAM1301AT
IC37		9A06878400	VOLTAGE DETECTOR	BVIRE5VL30CARZ
IC52		9A05424900	IC AMP STK4132(2)	BVISTK4132(2)
IC91		9A06868000	IC, NJM7808FA	BVINJM7808FA

MAIN PCB ASS'Y

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
JK01	9A08883100	TERMINAL, ANT(USA 75 OHM)	CJJ3G010Z
JK11	9A08126500	MODULE, OPTICAL	HJS9L001Z
JK21	9A07872700	TERMINAL, IN/OUT	CJJ4R012Z
JK22	9A08883200	JACK, PIN BOARD JK060092JN	CJJ4R018Z
JW21	9A08883300	WIRE ASS'Y CR-H130	CWEH202150PR
JW51	9A08883400	WIRE ASS'Y CR-H130	CWE7202100RV
JW52	9A08883300	WIRE ASS'Y CR-H130	CWEH202150PR
L130	9A07886600	COIL, AXAIL 10UH	HLQ02C100KT
Q101	9A07888400	T.R, KTC3192OT	HVTKTC3192OT
Q103	9A08884100	TR, KRA107M	HVTKRA107MT
Q104	9A03745100	TR, KSA1175-YTA	KVTKSA1175YT
Q107	9A08878300	TR, KRC107M	HVTKRC107MT
Q108	9A08884100	TR, KRA107M	HVTKRA107MT
Q109, Q110	9A07888500	TR, KTD1302T	HVTKTD1302T
Q201- Q208	9A07888500	TR, KTD1302T	HVTKTD1302T
Q211, Q212	9A08878300	TR, KRC107M	HVTKRC107MT
Q213	9A08884100	TR, KRA107M	HVTKRA107MT
Q361	9A08878300	TR, KRC107M	HVTKRC107MT
Q362	9A08884100	TR, KRA107M	HVTKRA107MT
Q363	9A07887900	T.R KSB811YT	HVTKSB811YT
Q367	9A08878300	TR, KRC107M	HVTKRC107MT
Q368, Q369	9A07888500	TR, KTD1302T	HVTKTD1302T
Q370	9A08884100	TR, KRA107M	HVTKRA107MT
Q502, Q503	9A08878300	TR, KRC107M	HVTKRC107MT
Q504	9A08884100	TR, KRA107M	HVTKRA107MT
Q505, Q506	9A08884200	T.R KSA1175Y	HVTKSA1175YT
Q507	9A08878300	TR, KRC107M	HVTKRC107MT
Q901- Q903	9A08884100	TR, KRA107M	HVTKRA107MT
Q904- Q906	9A08878300	TR, KRC107M	HVTKRC107MT
Q908, Q909 ⚠	9A08883500	TR, KTC2026Y	HVTKTC2026Y
Q911 ⚠	9A07888200	T.R KTA1274YT	HVTKTA1274YT
Q915 ⚠	9A01388300	TR, KSD288-Y-AB	KVTKSD288Y
Q916 ⚠	9A08883600	TR, KSA614Y	HVTKSA614Y
Q917, Q918	9A08878300	TR, KRC107M	HVTKRC107MT
Q920	9A08884100	TR, KRA107M	HVTKRA107MT
R111	9A07895300	RES, CARBON CRD20TJ331T	CRD20TJ331T
R531	9A08125900	RES, CARBON 20TJ153T	CRD20TJ153T
R535 ⚠	9A07892000	RES, CARBON 1K OHM 1/2W	KRD50FJ102T
R536- R539 ⚠	9A07892100	RES, CARBON 2.2K OHM 1/2 J	KRD50FJ222T
R540 ⚠	9A07892000	RES, CARBON 1K OHM 1/2W	KRD50FJ102T
R541, R542 ⚠	9A05338000	RES, METAL 10 OHM 1W J	KRG1ANJ100H
R543, R544 ⚠	9A06062000	R, CEMENT 0.27 2W	KRF2CJR27H
R904 ⚠	9A07892100	RES, CARBON 2.2K OHM 1/2 J	KRD50FJ222T
R905 ⚠	9A08221300	RES, METAL 2.2 OHM 1W J	KRG1ANJ2R2H
R924 ⚠	9A05338100	RES, METAL 22 OHM 1W J	KRG1ANJ220H
R926, R927 ⚠	9A06062000	R, CEMENT 0.27 2W	KRF2CJR27H
R928, R929 ⚠	9A06760900	R, FUSE 0.47 J 1W	KRQ1AJR47H
R930 ⚠	9A06761000	R, CARBON 3.3M K 1/2W	BRDERC12UGK335T
RY51 ⚠	9A06224600	RELAY G5Z-2A-DC12V	BSL4A008ZE
S301	9A07878500	SW, TACT SKHV10910G	CST1A012ZT
SP51	9A08214900	TERMINAL , SPEAKER	CJJ5P017Z
T101	9A07873000	COIL, AM ANT2	CLA2C005
T103	9A09229500	I.F.T.FM	CLI3B030Z
T104	9A07873100	I.F.T,AM	CLI2B103-G
T901 ⚠	9A07873400	TRANS, POWER(MAIN)	CLT5P037ZU

MAIN PCB ASS'Y

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
TF01	9A08215300	PACK , FRONT END	CNVKSTF401VA3
TW91	9A06674400	WAFER, 7.92MM (YUNHO)	KJP02KA060ZY
VR11	9A05940500	R, SEMI FIXED EVNDJAA03B53	BVN1PA502B01T
VR12	9A08040700	RES, SEMI FIXED(22K OHM)	KVN1RA223B01T
VR13	9A08040600	RES, SEMI FIXED(10K OHM)	KVN1RA103B01T
WF21	9A07889800	CONNECTOR MOLEX35237-0610	KJP06GB99ZM
WF22	9A08219900	CONNECTOR	KJP11GB99ZM
WF51	9A08219700	WAFER	KJP05GB103ZM
X101	9A07491700	RESONATOR,CERAMIC	HVFZTB456F11
X102	9A07491800	FILTER, CERAMIC	HVFLZU450C4N
X104	9A08883700	CRYSTAL	HOX07200A200C
X361	9A08879000	CRYSTAL	HOX08000E160C
X362	9A05188800	CRYSTAL, 32,768KHZ DT-38	BOX00032A120C
Y102	9A07873300	COIL, AM OSC	CLO2B008Z

CD PCB ASS'Y

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A08878000	CD PCB ASS'Y EX-CD3	COP11381C
	9A08878100	PCB, CD	CUP11381Y
BN66	9A08878500	WIRE ASS'Y	CWDB015150EW
BN67	9A08878600	WIRE ASS'Y	CWZCR130BN67
CN61	9A08220300	WAFER , CARD CABLE (STRAI)	KJP16GA117ZG
CN62	9A08220400	WAFER, CARD CABLE (ANGLE)	KJP16GB116ZG
CN63	9A08219500	WAFER	KJP02GA68ZG
CN64	9A07335100	WAFER MOLEX 53015	KJP04GB46ZM
CN65	9A08219500	WAFER	KJP02GA68ZG
D601 D602	9A08878200	DIODE 1SS133T-77	HVD1SS133MT
D604	9A08878200	DIODE 1SS133T-77	HVD1SS133MT
IC61	9A08563900	IC, RF AMP DIGITAL SERVO	HVITA2150FN
IC62	9A08878700	IC, DIGITAL SERVO TC9462F	HVITC9462F
IC63	9A07887300	I.C POWER DRIVER TA2092N	HVITA2092N
IC64, IC65	9A07887500	I.C TA7291S	HVITA7291S
IC66	9A08878800	I.C CD MICOM TMP87CM78F	HVIANAM1325AC
IC67	9A08218600	I.C, REGULATOR	HVIMC7805C
L601 L621	9A07886600	COIL, AXAIL 10UH	HLQ02C100KT
Q601	9A07888100	T.R TKTA1266YT	HVTKTA1266YT
Q602	9A07888500	TR, KTD1302T	HVTKTD1302T
Q603	9A08878300	TR, KRC107M	HVTKRC107MT
RZ01	9A05337800	R, NETWORK SN5X103J	KRGSN5X103J
X601	9A08878900	CRYSTAL	HOX16934A120F
X602	9A08879000	CRYSTAL	HOX08000E160C

FRONT PCB ASS'Y

REF. NO.	PARTS NO.	DESCRIPTION	REMARKS
	9A08877000	FRONT PCB ASS'Y EX-CD3	COP11384B
	9A06059800	TAPE PROTECTIVE	K4FH300
	9A07361500	TAPE, BOTH SIDE 3M #4920	K4FM073
	9A08877200	FRONT PCB	CUP11384Z
	9A08877300	BRACKET, FLT	CMD1A374
BN75	9A08877400	WIRE ASS'Y	CWDB011110EW
CN71	9A08220000	WAFER, CARD CABLE	KJP15GA115ZG
CN72	9A08220500	WAFER, CARD CABLE	KJP24GA115ZG
D701	9A08131100	L.E.D, YELLOW SLR342YCTB7	KVD342YCTB7T089
FIP1	9A07889000	F.I.P SVA10MM17	KFLSVA10MM17
HP71	9A07886500	JACK , HEADPHONE	HJJ2D003Z
RS71	9A08563600	SENSOR, REMOCON	KRVHIM602H32
S701- S708	9A07878500	SW, TACT SKHV10910G	CST1A012ZT
S751- S760	9A07878500	SW, TACT SKHV10910G	CST1A012ZT
VR71	9A08162900	VR, ENCODER EC16B243040F	HSR2A011Z